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## ORIGINAL LECTURES.

### SOME FORMS OF ORGANIC DISEASE OF THE HEART.

*A Clinical Lecture, delivered at Bayview Hospital.*

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GENTLEMEN: This patient is a German peddler. He is seventy-three years old and a widower. He says he has always been pretty well until of late, when he began to have shortness of breath. He was able, however, to attend to his business until last Christmas. Pain in the chest and swelling of the legs then developed. Since that time he has been able to do no work. He entered the hospital June 10, 1884. He is rather small in stature and is emaciated. His face is deeply wrinkled, and the natural sallowness of his skin is combined with a duski-ness that intensifies his expression of discomfort. *Arcus senilis* is well marked. His supraclavicular and supra-sternal fossæ are depressed, but the lower intercostal spaces are widened. The thoracic parietes are seen to be almost motionless, his respiration being largely abdominal. His lower extremities are extremely anasar-cous. His temperature is normal. His respirations are 24 to the minute with prolonged expiration. His pulse ranges between 90 and 100, and is weak, very irregular, and unequal. The artery is cord-like from calcification. The area of cardiac dullness begins at the fifth rib superiorly. Transversely, it extends from the left border of the sternum to an inch and a half beyond the nipple line. The cardiac impulse is felt in the fifth intercostal space, but is unusually widely diffused, and can be felt in the sixth interspace. Anteriorly, the pulmonary resonance is almost tympanitic, but is diminished posteriorly, on both sides inferiorly, and over the right scapular region there is decided dullness. A cardiac murmur cannot be detected; the valves close with a sharp, ringing sound. Auscultation of the heart, however, is rendered difficult by the dry and moist râles heard everywhere, in front and behind, except at the point of greatest dullness, where there is rude, almost tubular breathing, with increased vocal fremitus and resonance. For several months cough, with free muco-purulent expectoration, has been very annoying. Dysp-nœa is very urgent. His tongue is slimy and moder-ately coated; his appetite bad; his bowels regular. His urine is acid, abundant, and slightly albuminous. He has never spat blood.

This case presents a most interesting train of symp-toms. To account for the gradually increasing dysp-nœa, we discover satisfactory evidences of cardiac dilatation, and yet the superior margin of dullness is on the line of the fifth rib, above which the note is even tympanitic. The breath-sounds indicate a general bronchitis, which, we find, has recently become aggravated. The slow-

ness with which the lungs are emptied of air confirms the diagnosis of emphysema suggested by the tympanitic resonance anteriorly. Emphysema is a common cause of cardiac dilatation and hypertrophy beginning in the right ventricle; but here it is not sufficiently pronounced to enable us to speak with certainty. We miss the peculiar enlargement of the thorax so characteristic of hypertrophic emphysema. There can be no doubt, however, that this condition is present to a considerable extent. To whatever extent disordered, his heart seems to have served him pretty well until the infirmities of age began to overtake him, when, weakening and par-taking of the fatty degenerations of which his *arcus senilis* is an index, it began to yield before the periph-eral resistance and to dilate. The increased cardiac bulk is shown in the diffusion of the apex heat, though the emphysematous lung marks the upper border of its area. That this enlargement is due to dilatation, and not to true hypertrophy, we conclude from the di-minished force of the beat and the irregular and un-even pulse. The sharp closure of the valves show that their office is properly performed. The heart fails to drive the blood through the arteries with sufficient force, and allows mechanical or venous hyperæmia to arise. The right heart, distended with the blood it cannot efficiently drive onwards, is unable to receive the full current from the systemic veins. Stasis thus produced is the cause of the throbbing jugulars (a sign often due, it is true, to tricuspid insufficiency), the cyanosis, the general dropsy, hepatic and renal engorgement, and consequent albuminuria. The left heart, also yielding before the increased resistance, becomes distended, and not only sends the current onward in diminished violence, but causes an engorgement additional to that already present in the emphysematous lung. In the present instance, the pulmonary engorgement seems to have produced an area of consolidation, the signs of which we detect over the posterior portion of the right lung.

Here, then, the cardiac disorder appears to be the important one. You have observed the constant and painful effort our patient is compelled to make in order to continue the struggle for life. Mark the contrast with our next case.

This young colored man is nineteen years old, of slender physique. He is a jockey. He was admitted September 16th, with syphilis. There are no signs of pulmonary, hepatic, or renal disease. He has never had rheumatism. His heart trouble was discovered in the course of the examination, and seems to have occasioned no discomfort whatever. Careful examination is required to detect the cardiac murmur, which can only be heard in the nipple line over the sixth inter-costal space. It is a faint, systolic bruit. There is little or no cardiac hypertrophy. I am unable to say exactly why the murmur is only heard at the point indi-cated. It is not anæmic, because it is apical. Unless it is due to some irregularity of closure of the mitral valve,

through imperfect action of a papillary muscle, it is caused by disease of the mitral valve with regurgitation. It is of such small intensity that the boy is still able to run up-stairs and to attend to ordinary duties without inconvenience. Whatever the degree of insufficiency, we may be sure it is compensated for by slight, though imperceptible, cardiac hypertrophy; the bearer is unconscious of a defect. I show the case to illustrate the small inconvenience a slight valvular disorder may occasion, and how, so long as it is not progressive, the heart is able to compensate for the damage.

The next case is that of a Maltese sailor, of peculiarly effeminate appearance; professedly twenty-five years of age, but looking much older. He was admitted April 28th. He informs us that his general health was pretty good until about one year ago, when he caught cold at sea, since when he has never been well. As you see him, he has that pallor and puffiness of face that are so often seen in certain cases of renal disease. He has extensive general anasarca and ascites. He is profoundly anæmic and debilitated, and suffers from frequent headache, indigestion, and pain in the lumbar region. He has pronounced albuminuria, and tubercasts are abundantly present in his urinary sediment. In a word, his history for the past eighteen months is that of Bright's disease, beginning probably as a diffuse tubular nephritis. My special object in showing him today, however, is to speak of a cardiac valvular trouble that is probably consecutive to his renal disorder. Over the second right intercostal space, close to the sternum, one hears distinctly a diastolic murmur. This is audible over only a limited area, not larger than a silver dollar in surface. The heart-action is slightly excessive, and the apex beat, though in the fifth intercostal space, is almost in the nipple line. We thus recognize regurgitation of blood through the aortic valve with slight cardiac hypertrophy, but we look in vain for the train of symptoms that are usually associated with advanced cardiac disease, associated with aortic regurgitation, symptoms that are unusually well marked in our next patient.

John S., an unmarried German baker, twenty-three years old, was healthy until his sixteenth year, when he had rheumatic fever. He has never felt well since, though he has never again had rheumatism. He was able to work at his trade, however, until this summer, when he gave up, and was confined to his bed for nine weeks on account of his heart trouble. He is of muscular frame. Observe him attentively, and you will notice a violent pulsation over his heart and subclavicular region. Indeed, you may detect pulsation in his upper extremities and head, wherever his larger arteries become superficial. His heart apex beats in the fifth intercostal space, but one inch beyond the nipple line. The area of cardiac dulness merges into a flatness due to a moderate pleural effusion which, in the axillary line, is level with the seventh rib, and, posteriorly, with the angle of the scapula. A distinct bulging is seen over the cardiac region. The circumference of his chest is  $17\frac{1}{2}$  inches for the right, and  $18\frac{1}{2}$  inches for the left side at the nipple level. Splenic and hepatic dulness are very slightly increased. The temperature is normal. The pulse-rate is 86. Here, however, we notice striking peculiarities. The cardiac impulse is felt to distend the

vessel with surprising violence, but, at the very moment of the shock, the artery falls away from the finger, as if exhausted at the first onset. The pulmonary auscultatory sounds are normal, with the exception of those indicative of left pleural effusion; but the cardiac sounds are greatly altered. At the apex a loud, blowing systolic murmur is heard, and at the base there is a pronounced double murmur, running at the systole into the common carotid arteries. There is no dropsy, no albuminuria. The appetite is good, the tongue clean, the bowels regular. Contrary to what might have been expected, sleep is good, and without troublesome dreams.

We have here a cardiac disease of rheumatic origin, having begun probably in the aortic valve, as a regurgitation. With the progress of valvular disease, stenosis eventually developed, and the very great hypertrophy of the left ventricle that always reaches its highest grade in aortic disease. The intensity and diffusion of the basic systolic murmur prevent our deciding whether it is that we hear at the apex or a true mitral regurgitant murmur.

The effect of the cardiac hypertrophy is seen in the greatly increased pulse-wave, while the pronounced regurgitation causes the sudden collapse of the artery. The result is the "water-hammer," or "Corrigan's," pulse, that is itself diagnostic of the cardiac disorder we are now considering. Why did we not observe a similar combination of symptoms in our preceding case, in which aortic regurgitation is well established? Simply because the lesion has not been long enough present. The area of the murmur is very circumscribed, showing a less intensity than in our present case. The aortic regurgitation has been established too recently, and is of too limited extent, to produce the highly characteristic symptoms we observe here. Should he live long enough, they will become developed.

These cases represent, each, a different form of cardiac disorder. Their exciting causes are probably different. This elderly man our first patient, whose venous system is engorged with the blood his feeble heart allows to accumulate, suffers from such dyspnoea that his every breath is an effort. We know that his distress might be alleviated, could we but restore to his heart its normal force and activity. Our remedies, therefore, shall be such as tend to add to this organ new power, evanescent though it must be. We can stimulate the cardiac innervation, and in gaining temporary power, may hope to overcome for a time the engorgement, with its consequent œdema. Our efforts in this direction will be assisted by the judicious employment of drastic cathartics and diuretics. To stimulate his heart, and to enable it to hobble along to better purpose, we order alcohol, in small doses, and the carbonate of ammonia. To secure copious watery stools, we employ the compound jalap powder in drachm doses, as occasion requires. As a diuretic, we can give nothing so good as digitalis, of which he will take the infusion in half fluidounce doses thrice daily. Exactly how digitalis acts in these cases, is not known; but it is certain that in passive engorgement with dropsy from the weakened hearts of elderly persons, its judicious employment will often restore to comfort those who seemed to have been already pressed by the hand of death; whether it is by increasing heart-action, which

in view of recent experiments, seems doubtful, or by restoring regularity of heart-action by increasing arterial resistance, or as a simple diuretic, we cannot say. The necessities of his condition will teach him the mode of life most calculated to be of benefit, and he will be made to follow appropriate rules of diet and general behavior.

Our second case needs no special treatment. He is conscious of no discomfort; and for the present, the slight valvular defect finds compensation in slight hypertrophy, and an equilibrium may be maintained for many years. By injudicious interference, much damage might be done. The patient whose cardiac disorder is consequent upon Bright's disease, requires treatment addressed almost exclusively to his renal and general condition. By relieving the disease of his kidneys, we lessen the intensity of the exciting cause of his heart trouble, and alleviate the peculiar vascular alterations that so constantly provoke cardiac hypertrophy. The aortic regurgitation will call forth such increase in muscular power as will, for the present, provide for the shortcomings of the valves.

Our fourth case appeals strongly to our sympathies. The valvular disease, probably of years' standing, has been surely and steadily progressive, and has all the time been provided for by increasing cardiac hypertrophy. These are signs that before long the valvular disorders will outstrip the compensating hypertrophy, or that the excessive demands made upon the heart muscle will result in its atrophy and dilatation to such an extent that finally the impairment to the circulation will lead to a fatal issue, which is more apt to occur suddenly in this than in other valvular defects. What can we do to assist the conservative efforts of nature? Indeed, very little. There is no need of cardiac stimulants, his heart already beats with most unusual violence. Should his heart begin to fail, it will then be the time to employ them. We can give no drugs that can arrest the gradual advances of the processes that are working out his destruction. We can guard him against a recrudescence of his rheumatic disorder, or of complicating maladies, by proper hygienic surroundings. You will have observed that these patients do not suffer from apprehension and general anxiety of mind, such as are so often experienced in persons with purely functional cardiac disorder. This is not uncommon. Indeed, you will often detect advanced organic disease in those who have little or no suspicion that their hearts are not in perfect order.

## ORIGINAL ARTICLES.

### SURGICAL OBSERVATIONS IN THE TREATMENT OF THE DISEASES AND ACCIDENTS OF THE LIVER.<sup>1</sup>

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UNTIL within a recent period, the liver and its annexa have appealed in vain for the help accorded to its neighbors in the abdominal cavity. Such aid has been restricted to the treatment of abscess and hydatids. The frequent occurrence of suppurative

hepatitis in the tropics, afforded opportunities for clinical study that led to the early recognition of indications for the prompt and early evacuation of cavities resulting from that disease. Thirty years ago, Budd, in his monograph on diseases of the liver, expressed himself as follows: "From what I have seen and read of hepatic abscess, it seems to me that the proportion of recoveries has been just as great, or even greater, when the abscess has opened into the lung or the bowels as when it has made its way through the side, and I can only explain the circumstance by the fact that, when an abscess has pointed at the side, it has seldom been allowed to open of itself. When the abscess is large, and has existed long, its walls are thick and unyielding, and it has in consequence still less disposition to close up. When an abscess of this kind opens of itself, either outwardly or into the intestine or lung, matter continues to be discharged, and the patient generally dies, worn out by the protracted suppuration. When the abscess is opened by the knife, the same thing, of course, happens, and the patient dies the earlier for our meddling. In India now, it seems to be the common practice to thrust a long exploring needle into the liver where the presence of an abscess is suspected; and now and then, perhaps, the disease may be cured in this way. A single abscess may be opened when it is of moderate size, and before its walls are too thick and firm to close together, and the cavity may be thus obliterated. But there are many objections to the practice that to me seem quite decisive against it. First, there is the danger of hemorrhage, and of setting up fresh inflammation by the mechanical injury thus done to the liver. This danger may, perhaps, be small for a single puncture; but if the abscess be deep-seated, it may not be hit at the first thrust. Again, from the difficulty of distinguishing the different diseases of the liver, if the operation be commonly adopted, it must often be performed where there is no abscess at all. It will readily be imagined that much mischief may be done in this way. Often, too, there is more than one abscess. This was the case in thirteen of the twenty-nine cases recorded by Annesly, and in still larger proportion in the cases collected by Andral, and Louis, and myself. We can hardly hope to reach all the abscesses; and unless we do, we cannot cure the patient. Then there is the danger, that has been before alluded to, of letting the matter escape into the peritoneum, and setting up peritonitis that may be speedily fatal. An occasional instance of success will, I fear, be a poor set-off against the cases in which the operation has done mischief, or failed of doing good."

Such was the doctrine enunciated by a writer that was recognized as an authority in 1852. We shall see how the improvements in modern treatment have swept away most of these objections, although, at the same time, we are bound to give due consideration to opinions based upon the study of a large number of cases. That the sudden evacuation of such abscesses is apt to be followed by considerable hemorrhage from the granulations that line its interior, we are well aware, but that it is apt to be of a serious character is extremely doubtful. At all events,

<sup>1</sup> Read before the New York Surgical Society, January 13, 1885.



it is probable that the benefit derived from such evacuation will outweigh the loss of blood. The character of the tissues in which such cavities are formed is opposed to their contraction, and the surrounding structures are very likely to resent interference by extension of inflammatory processes that may perpetuate the conditions already existing, or lead to the formation of suppurative foci in the neighborhood, or even to necrotic processes of a serious character. Most of these conditions which are referred to as complicating incision or puncture, will occur when a spontaneous opening forms. It is true that such an opening is usually minute, and permits a very gradual discharge of the contents, but without antiseptic appliances it would be impossible to keep such a cavity aseptic, and such a condition would cause bad local reactions, to say nothing of the danger of general infection. Then, again, to open through the abdominal or lower thoracic walls, occupies a considerable period of time, during which the abscess itself is enlarging, and the patient himself becoming more exhausted. I think that where we find a large number of small collections of pus scattered through the liver, with one large central abscess, that the histories of such cases, and the post-mortem investigations, go far to prove that the small collections are secondary to the large one, which would be an indication for early operation, and I certainly cannot see that the existence of other collections should contraindicate an operation on an abscess that is fluctuant and approaching the surface. Of course, I am not referring to the multiple abscesses that are found in pyæmia. A man entered the service of the Presbyterian Hospital on the 20th of August, 1883, with a large hard tumor situated in the epigastric and right hypochondriac region. It was prominent in front, and over the centre was a spot two and a half inches in diameter, that was exceedingly tender, and the seat of obscure fluctuation. His general condition was bad. On the 22d, the aspirator was used, and three ounces of pus were withdrawn. On the 25th, the operation was repeated, and the same amount of pus was obtained. On the 27th, he was very restless, sweat profusely, and complained of severe epigastric pain. Sept. 2d, he vomited a good deal of glairy mucus. On the 5th, he had diarrhoea, and the excreta were mixed with blood and pus. The diarrhoea continued, and he died on the 12th of gradual exhaustion. At the autopsy the principal lesions were found in the liver, although there were also found evidences of chronic diffuse nephritis. The liver was found to be the seat of multiple abscesses. The lower border of the right lobe was found adherent to the abdominal parietes. At this point was a large abscess which communicated with the commencement of the duodenum by a ragged opening, which was cut off from the abdominal sac by adhesions of the parietal and visceral peritoneum. It is probable that these smaller abscesses were secondary to the large one, and it is probable that an early operation might have prolonged the man's life.

The dread of opening the abdominal cavity in an attempt to reach an abscess of the liver, for a long time deterred medical men from operating; much

time was lost in studying the physical signs that indicated the formation of adhesions. Then Graves made an advance in the right direction, practising an incision over the most prominent part of the tumor down to the peritoneum, filling it with lint, and thus diminishing resistance and inviting a spontaneous discharge. At a later period Recamier advised opening the abscess from without inwards, by the successive applications of *potassa fusa*, a very slow and painful process. In 1842 Murray called attention to the advantages derived from the method by puncture, insisting that the introduction of an ordinary sized trocar and canula, leaving the latter in position until adhesions formed between the liver and abdominal wall, and that this does occur in the large majority of cases there can be no doubt. In fact, Jameson (*Lancet*, April 29, 1871) demonstrated such to be the fact in a case in which the patient died on the fourth day after the operation, and in which the parts were found adherent around the artificial opening for a breadth of one and a half centimetres.

With improved methods of treating such conditions, we are warranted in anticipating more favorable issues in the future. In 1883, Lawson Tait reported four cases of hepatotomy, in which the existence or non-existence of adhesions were not considered. Three of these were cases of hydatid disease, and one was for large abscess. In all of them incisions were made through the abdominal wall, exposing the cyst, which was then opened and attached to the margins of the external opening by suture. All of these cases recovered completely. The great advance made by the author of these operations was in attacking the disease by a systematic procedure, without regard to adhesions.

Conditions of the annexa of the liver calling for surgical interference are very various, but most commonly due to stenosis and occlusion of the biliary excretory ducts. Simple dilatation of the gall-bladder is associated with obliteration of the folds that are characteristic of its lining membrane, and thinning of its walls. It may attain an enormous size, but generally maintains its natural form. It is not generally adherent to surrounding parts, and contains only more or less bile-stained mucus.

Empyema of the gall-bladder is not attended with change in form, but only in size. It may be free, or united to surrounding parts by firm fibrous adhesions; the walls have become friable, and are easily lacerated. Recoveries from simple dilatation are common enough. The obstruction may cease to exist, especially if due to calculus in the common or cystic duct; and on the removal of this, the inflammatory processes in the gall-bladder speedily disappear. In other cases, the disease progresses steadily, exposing the patient to the dangers of ulcerative perforation or rupture. Especially is this apt to happen in empyema due to gall-stones. In some cases it has been noticed that very marked changes occur in the size of the distended gall-bladder, due to calculi acting as gall valves. A well-marked and interesting case of this kind entered the Presbyterian Hospital, June 28, 1880. The patient was a widow, 45 years old, who first began to suffer from pain in her right hypochondrium, four years



before admission. Eighteen months before, she began to have unusually severe paroxysms of pain, that were preceded by chills and fever, and these attacks were repeated with intervals of eight or nine days. On admission, she was found to be deeply jaundiced, had white stools, and high-colored urine; complained of pain, pruritus, and occasional vomiting. There was marked tenderness over the epigastrium; the liver was enlarged, measuring six inches in vertical line; its free border could be felt free from any irregularities. Day after admission, she had one of her attacks, beginning with chill, followed by exaltation of temperature. She suffered from intense pain, and the gall-bladder could be felt distinctly below the free border of the ribs. After this the paroxysms occurred about once a week. It was observed that the gall-bladder became more and more dilated before and during the attacks, with increase of the jaundice to bronze color; and that on subsidence of the pain, the size of the gall-bladder diminished and the jaundice became lighter in color. It was thought that the obstruction was due to calculus in the common duct; that when this became dilated it permitted the calculus to recede, and the contents to escape; that when the dilated duct emptied itself it grasped the stone and closed the duct. After lingering until September 30th, she died from profuse diarrhoea and exhaustion.

The autopsy was made thirteen hours after death. The portal system was found distended with blood. There was no fluid in the cavity of the peritoneum. The stomach and duodenum were opened *in situ*. On the inner surface of the latter was a prominent conical projection, on the apex of which was the opening of the common duct. Pressure on the gall-bladder caused an escape of bile from this orifice. A probe passed through it entered a large ampulla, which, on further examination, was found to be the dilated duct continuous with a cavity in the substance of the liver itself, and probably caused by ulceration of the walls of the duct by the pressure of a calculus which had recently escaped into the intestine. The two ducts which unite to form the main hepatic duct were each distended by a calculus as large as a good-sized marble. There were several small abscesses in either lobe, and the left lobe was larger than the right. In this case, all those conditions which it would have been possible to recognize during life would have warranted an operation, and yet the pathological lesions found after death would seem to prove that such a procedure would have done no good. The abscesses were no doubt secondary to the ulceration in the walls of the common duct.

The operation of cholecystotomy was first proposed by Jean Louis Petit (*Memoires de l'Acad. de Chirurgie*, tome i. page 155); afterwards, and independently, by Dr. Handfield Jones. It was first performed by Dr. Bobbs, June 15, 1867, then by Dr. Marion Sims, Ransohoff, and a number of European surgeons, and it may now be fairly said to be one of the recognized operations in surgery. But from the nature of conditions that not infrequently complicate it, it must often fail. It will frequently happen that the calculi are inaccessible, hidden in recesses and diverticuli that cannot be reached, and

that such circumstances will render it impossible to complete an operation justified by all the symptoms that could be made out during life. The steps of the operation will be similar to those used in gastrotomy. The careful introduction of each interrupted suture through skin, parietal and visceral peritoneum, and incision immediately following fixation, has been followed by the best results. Circumstances might present themselves that would render it advisable to open the gall-bladder before attaching it to the abdominal wall. In attaching the walls of a cavity distended to its utmost, a faulty needle, with cutting edges, might easily penetrate through all the tunics that enter into the composition of its walls, and permit a leakage sufficient to excite peritonitis of a fatal character. If such conditions should appear to warrant incision previous to suture, it would be proper to use Keen's scoop, or to empty and disinfect the cavity through the medium of an aspirator.

Ruptures of the liver, generally fatal, are more immediately concerned in the subject of this paper. Most frequently the result of severe accidents, they are attended with marked symptoms of collapse, sometimes with local conditions that may indicate the existence of abdominal hemorrhage. More frequently the patient dies speedily, and in the majority of the cases that I have seen, the lesions have only been suspected during life, but I think that in the future the diagnosis will be made during life by explorative operations.

Five years ago I saw a youth who had been thrown from a wagon a month before my visit. He came in violent collision with a lamp post, but soon recovered from shock. His physician informed me that for several days there were no symptoms of serious mischief, but that after the first week there slowly developed tenderness and swelling in the right hypochondriac region. I found him with a much distended abdomen, dull on the right side, and resonant on the left. The dulness on the right was continuous with the usual area of liver dulness, and reached downwards nearly to the iliac fossa. The swelling was fluctuant, and had been emptied more or less completely on several occasions by the physician in attendance, and on the day of my visit a large amount of apparently pure bile was removed by the aspirator. There were no symptoms of obstruction present, and it was the opinion of the physician that rupture had occurred, and that the bond of union had yielded slowly to the pressure of the ducts, forming an adventitious cyst. Subsequently a large opening formed, which drained off large quantities of bile, and he succumbed at last to the drain upon his system. Unfortunately the case is not complete. I saw him only once, and efforts to obtain an autopsy were of no avail.

The following case of injury occurred in my service, and is of considerable interest in several respects (reported by Charles G. Wagner, House Surgeon):

Charles McHugh, 29 years old, native of Ireland, was admitted to the Presbyterian Hospital in the City of New York, July 3, 1883, service of Dr. Charles K. Briddon, with the following history:

While under the influence of liquor, and attempting to work at his trade as a bricklayer, he lost his

footing and fell from the third story to the cellar bottom, landing on a pile of bricks. When he was admitted to the hospital he was in a condition of profound collapse, which lasted for some considerable time. As soon as he was able to respond to interrogations, it was ascertained that he was suffering from severe abdominal pain, concentrated principally in the right hypochondriac and lumbar regions, and in the right scapulo-humeral articulation. His condition was such at this time as to preclude any very exact physical exploration, but no crepitus could be made out in the neighborhood of the shoulder. His temperature was about normal, his pulse frequent and thready.

On the following day the signs of shock were still present. It was noticed that all the urine that he had passed was bloody, the abdominal muscles were tense, and there was a manifest swelling between the cartilages of the ribs and the right iliac fossa, which region was exquisitely tender to the touch. Temperature  $103^{\circ}$ , pulse 120.

A week elapsed before the symptoms of shock had entirely passed, and during this time there was a gradual abatement of the local signs, the pain diminished, the abdomen became less tense, and there was an obscure fluctuation in the hypochondriac and anterior lumbar region. Urine still continued bloody.

*July 25.*—Three weeks after the injury was received, the blood had entirely disappeared from the urine; patient complained of much difficulty in breathing and pain in the side; there was some diffused abdominal tenderness, but it was still principally concentrated in the right side. There was absolute dulness from the nipple line to a level with the anterior superior spinous process of the ilium, and below the free border of the ribs fluctuation was manifest. Believing that the collection of fluid originated in the kidney, and that it was confined by a capsule formed out of connective tissue, it was determined to explore it with a needle. The puncture was made a little below the free border of the eighth rib, and on connecting with Dieulafoy's apparatus, sixty-nine ounces of fluid were removed. It had all the characteristics of pure bile. The chemical analysis and the microscopic appearances confirmed that opinion.

Patient was very much relieved by the operation. The difficulty of breathing and pain almost entirely disappeared, and his temperature dropped to nearly the normal. This condition was maintained until the evening of the following day, when the patient had a chill, which was followed by elevation of the temperature to  $103^{\circ}$ , pulse 136, respiration 36. In this short time the sac had refilled, the physical signs were as before, and he complained much of the pain and difficulty of breathing; his face was somewhat flushed, and there was a perceptible yellowish tinge of the sclerotics.

On the 27th, his symptoms were of such an urgent character as seemed to demand either aspiration or free incision, and the latter was determined upon. His condition did not appear to warrant the use of an anæsthetic. An incision one and a half inches long was made below the free borders of the eighth and ninth ribs, not being certain whether the fluid

was contained within the dilated gall-bladder or an adventitious cyst. The dissection was carried carefully through the abdominal muscles until the cavity was reached. The peritoneum was not opened. A large gush of bile escaped, and seventy-five ounces were collected. As soon as the opening was made, the index finger was introduced, and wherever it could reach so as to come in contact with the walls, the cavity appeared to be lined with a perfectly smooth surface. No blood and no coagula escaped. Of course, the finger was too short to map out the confines of the space. After it was emptied, another attempt was made to explore with the finger, but it was found that the internal aperture was blocked by a solid mass that moved upwards and downwards with the movements of respiration. On passing the finger downwards, it could be passed under this mass, which was made out to be the liver, which probably had been pushed up by the accumulation, and which had gravitated downwards on its removal. A large drainage-tube was fixed in position, and a dressing of carbolized gauze.

The operation gave prompt relief, and it was of course more permanent in character than the aspiration. A free discharge of bile occurred, necessitating frequent changes in the dressing, with occasional fluctuations as regards quantity. The discharge continued for several weeks. For the first few weeks it was apparently mere bile unmixed with other secretions. During this time the bowels were constipated, and the dejections were clay-colored, and, on one or two occasions, there was a slightly perceptible yellowish hue of the skin, but at no time amounting to jaundice, and there was not any marked emaciation.

On the 22d of August, during the absence of Dr. Briddon from the city, the patient accidentally removed the drainage-tube. A new one was introduced, and simple dressings to the opening, which only gave exit to a moderate amount of pus. On removing the dressing on the following day, the tube was missing, and could not be found. It was of ordinary soft rubber, a quarter of an inch in diameter, and eight inches long. It was supposed to have disappeared into the cavity of the wound, and it is possible that it might have been drawn into it by the suction movement of inspiration. At all events, it could not be found. After ineffectual efforts to recover it, the patient's temperature rose to  $105^{\circ}$ , where it remained for a few days, and fell again to the normal.

On the return of Dr. Briddon, August 2d, a tupelo tent was introduced for the purpose of dilating the sinus so as to permit of a more thorough exploration of the part. The patient took this out without permission, stating that he could not tolerate the pain caused by its presence. He had another rise of temperature. In fact, it appeared that any interference with the interior of the cavity was resented by a febrile movement. The treatment at this time consisted in daily irrigations, variously medicated—at one time with boracic acid, and subsequently with tincture of iodine.

About the middle of November, four months after the injury was received, patient began to have severe attacks of coughing, and there were some physical

signs of a suspicious character to the right of the right border of the middle of the sternum. These signs were thought to indicate the existence of a cavity. The attacks of coughing were always brought on during the process of irrigation; and on several occasions when iodine was used, the patient said that he could taste it in his mouth. It appeared probable that adhesions had formed between the lung and diaphragm on the one side, and that perforation of the latter had permitted the contents of the sinus to reach the lung itself. It was considered as extremely doubtful whether any drainage-tube had receded into the wound. It was, however, deemed proper to endeavor to make a more free exit for the discharge of anything that might be found about the diaphragm. There was no collection of fluid in the cavity of the pleura at any time.

November 27th, the patient was etherized, and the superficial portion of the sinus was gradually dilated, first with sounds, and then with the finger. It appeared to pass directly upwards, almost in contact with the inner surface of the ribs; at a distance of about three inches from the surface, the finger engaged in a narrow, constricted portion, and on forcibly dilating this passed into a larger cavity, apparently above the diaphragm. It was noticed at this time that there was some bloody froth in the mouth of the patient, and it was regarded as evidence that the opinion as to probable communication between the original cavity and the tubular structure of the lung was correct. A very faithful search was made for the missing drainage-tube with every conceivable form of forceps, and with wire snares passed through cut-off catheters, but without result, and it was considered as scarcely possible that it could have escaped being found. Two large drainage-tubes were introduced side by side, and the wound was dressed as before. This operation was followed by less reaction than was expected, and after a few days there was a manifest improvement in his condition. His cough entirely ceased, the discharge diminished in quantity, he gained flesh, and in about six weeks, though the discharge still continued, he asked for and obtained his discharge.

He was again seen about the middle of May, 1884. He was in very good general health, and had been working at his trade without inconvenience, still wearing the tube through which there was a little discharge.

#### HYDROCHLORATE OF HYDRASTINE,

A SOLUBLE SALT OF THE WHITE ALKALOID OF HYDRASTIS CANADENSIS; ITS APPLICATION AND VALUE IN OCULAR THERAPY.

BY ROBERT SATTTLER, M.D.,  
OF CINCINNATI, OHIO.

THE well-known application of the preparations of *hydrastis canadensis* as therapeutic agents for the various affections of mucous surfaces, induced me, several years ago, to test its efficacy in the management of catarrhal processes of the nose, retropharyngeal space, and pharynx, which constitute in so

many cases the primary or causative lesions of middle ear disease.

Although a fair and extended trial was given the remedy, which was resorted to in various forms of solution, and by various methods of application, I abandoned it, principally on account of the staining of towels and handkerchiefs which followed its local use and also for the reason that I became convinced that similar good results could be obtained in this locality from other remedies, with less objectionable consequences to the patient. Impressed, however, with its usefulness as a local stimulant to the vascular and secretory portions of the mucous membranes and therefore applicable in both the dry and hypertrophic forms of catarrhal inflammation, I determined to await the appearance of more satisfactory preparations of the drug and to renew at some future time a series of observations.

Several weeks ago, my friend Prof. J. U. Lloyd sent me several, to me altogether new, preparations of hydrastis with the request to test their therapeutic value in those affections in which the drug would appear to me indicated or applicable, and to furnish a brief summary of results for his work on *Drugs and Medicines of North America*.

At my request, two, four, and five per cent. solutions of the sulphate of berberine and of the hydrochlorate of hydrastine, the two alkaloids of the *hydrastis canadensis*, also the sulphate of berberine and hydrochlorate of hydrastine in powder form were furnished, and a series of observations, carefully recorded by my assistant, Dr. C. H. Castle, were at once commenced at my clinic.

The use of the berberine solutions proved of so little advantage and was so uniformly attended by so many disadvantages when used in the form of collyria, owing to the marked staining of the adjoining cutaneous area and the immediate precipitation or chemical transformation of the mucous secretions, that it was abandoned. The use of solutions, and particularly the insufflation of the powder into the bottom of the external auditory canal, was followed by the same unpleasant results—i.e., staining, no appreciable effect except coagulation or firm incrustation.

The solution of the hydrochlorate of hydrastine, a white, colorless, and readily soluble salt, which differs from and is superior, on account of its soluble property, to the ordinary commercial, yellow, insoluble, so-called muriate of hydrastine (muriate of berberine), yielded different and far more satisfactory results.

A two or three grain solution of this salt, dropped into the conjunctival sac of the healthy eye, produces immediate local evidences of irritation and stimulation, which involves, to a greater or lesser degree, the entire ocular, palpebral, and reflected divisions of the membrane. It is attended by a subjective feeling, variously described as stinging, burning, or scratching and excites more or less blepharospasm and lachrymation. The discomfort following the instillation, although pungent while it lasts, does not exceed a minute's duration, and ceases abruptly; more or less moisture of the lid margin and flakes



near the inner canthus, are the evidence of the stimulant irritation of the conjunctiva.

Stronger solutions excite a correspondingly marked local reaction, more prolonged discomfort, intensified reflex symptoms and greater flow of watery mucus. The agent seems to exert its influence exclusively upon the conjunctiva.

This local action established, it was resorted to in those affections of the conjunctiva in which a temporary, more or less pronounced hyperæmia is necessary to aid in or accomplish the absorption of infiltrated cellular or other inflammatory elements; follicular conjunctivitis, also in the second and third stages of granular conjunctivitis, and in another large class of cases eminently chronic, tedious, and annoying to both physician and patient; chronic catarrhal conjunctivitis attended by the usual local alterations and modification or suspension of function of the secretory structures of the conjunctiva. Weak solutions were instilled into the conjunctival sac three or four times a day. In several cases, a ten and a twenty grain solution were applied, in addition, to the everted lids, and washed off with water and brush.

The results in all cases of follicular conjunctivitis may be considered satisfactory. The discomfort following the instillations was less severe than after the use of mineral or vegetable astringents, or mercurial stimulants of the same strength. The desired object—prompt stimulation, active hyperæmia, irritation of the circulatory and glandular structures—was accomplished with less discomfort to the patient and a more tonic and stimulant local effect.

In the chronic granular and other catarrhal forms, the results were also satisfactory. In the purulent forms of infants, weak solutions were substituted for the customary alum. et potass. sulph. and carbolic acid solutions, and used at short intervals, but the topical application, once a day, of an argentic solution was continued.

Briefly reviewing the results, based upon the observation of a number of cases, it can be said that the white or soluble hydrochlorate of hydrastine is of value as a local tonic, stimulant, and irritant to the conjunctival membrane and that it neutralizes or transforms chemically the altered secretions in the various other catarrhal processes and catarrhal stages of more serious lesions, and on this account is a valuable and reliable substitute for the various other stimulants and astringents. In many cases also, in which a simple tonic or stimulant effect is desired, with the least discomfort to the patient, it possesses advantages and is therefore entitled to preference.

I desire to add that my experiments were made with the hydrochlorate of hydrastine and not with hydrochlorate of berberine. In commerce, the substance sold as hydrochlorate (or muriate) of hydrastine is in reality a salt of berberine, the yellow alkaloid, and prescriptions are likely to be compounded of the berberine salt, even though muriate of hydrastine is specified.

Prof. F. B. Power recently contributed an interesting paper on the chemistry of hydrastine to the American Pharmaceutical Association, and No. 4 of *Drugs and Medicines of North America* is devoted to a study of hydrastine and berberine.

## CAFFEINE AS A CARDIAC STIMULANT.

BY EDWARD T. BRUEN, M.D.,

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CAFFEINE has been used for some years in various combinations and for a variety of purposes. I do not think, however, that it has been as widely employed for its action upon the heart as its good effects in the hands of those who have prescribed it would warrant.

The operation of this drug augments the volume of the pulse and increases the urinary secretion, and it possesses no cumulative effect even in repeated doses.

Experimental evidence upon the frog seems to refer the physiological action of caffeine to direct stimulative operation upon the cardiac muscle, increasing the energy of the systoles, and also regulating their rhythm. In a recent article in the *Therapeutic Gazette*, November, 1884, by Dr. Dujardin-Beaumetz, the history of this drug has been concisely reviewed. The substance of the observations of Trousseau, Rognetta, Dettle, and others claims the action of caffeine as accelerating the pulsation of the heart; while Caron, Meplaine, and Fossagrives assert that it slows the pulsations of that organ. Dujardin-Beaumetz also shows that caffeine was used by Zwinger, a Dutch physician, in 1725, in dropsy, and recently by Jaccoud and Gubler, who held that this drug is an ideal diuretic, not only in diseases of the heart, but also for the treatment of renal diseases with albuminuria.

My purpose is very briefly to relate my experience in its use after an extended trial of the drug. Granted the most satisfactory action of caffeine as a diuretic, like digitalis secondarily through its action upon the circulation, let me draw especial attention to its operation as a cardiac tonic.

Like digitalis, it is capable of producing a profoundly efficient stimulative effect even in advanced stages of cardiac degeneration. It is even more potential than digitalis in cases of extreme heart disease, in which digitalis frequently fails. It is difficult to explain this clinical fact since caffeine does not affect the vaso-motor nerves, a lack of which influence sometimes accounts for the failure of digitalis. More probably the superior action of one or the other drug in the above cases is merely a manifestation of the advantage of employing a new stimulant when the cardiac nerves have become insensitive to an influence of the same nature.

In my experience, caffeine has no influence as a cardiac regulator which is comparable to digitalis. This is unfortunate, since it is undesirable to combine digitalis with caffeine, because the preponderating effect of digitalis is also as a cardiac stimulant, not regulative; moreover, we use caffeine usually only in cases in which digitalis has failed. The most effective combination with caffeine to secure its operation as a cardiac regulator, is strychnia. This drug, by stimulating the vaso-motor and respiratory centres, and possibly also the pneumogastrics, sometimes is a most desirable adjuvant to caffeine. It is also serviceable after the use of caffeine has been discontinued,

for the latter is a remedy which is not suitable for prolonged employment as a cardiac tonic. The vascular system seems to grow accustomed to its operation, or even more frequently gastric irritation or dyspepsia necessitates its withdrawal. This objection cannot be urged against digitalis. Belladonna and convallaria come next in order as supplementary drugs.

The chief objections to the administration of caffeine arise from the gastric irritation, pain, and vomiting, which it occasionally provokes. This complication is not constant, but seems to present itself and contra-indicate caffeine in the same case in which the drug can be used with impunity at some other time. Symptoms of gastric irritation may appear even when caffeine is employed in small doses as well as in large, and compels its suspension or use by the hypodermic method. Toxic effects, such as confusion of the head with giddiness, have been mentioned by German authorities, but these complications have not embarrassed me.

I have found the most useful dose of caffeine has been four grains, administered three times daily. Sometimes, however, two grains, three times daily, have been sufficient, and in no case have I given more than fifteen grains per diem, my rule having been to use the smallest amount of the drug which would develop its characteristic action.

Abroad, very much larger doses seem to have been employed with impunity, and apparent benefit. Dujardin-Beaumetz observes that the good effects of the drug, when asystole is threatened, cannot be said to be exhausted unless ten grains, three times daily, have been employed. Carl Becker and Riegel (*Wien. med. Blatt.*, 5, 15, 1884) assert that even larger doses have been used without disagreeable consequences. I believe that unpleasant gastric symptoms might be expected if such large amounts should be prescribed. Caffeine should always be administered, not its so-called citrate. The basic properties of the drug are very weak, and, properly speaking, acetates, lactates, or citrates of caffeine do not exist. Mr. Llewellyn, of Sixteenth and Chestnut Streets, has prepared for me a number of solutions of the drug, but has found that caffeine, or its citrate, cannot be given even in the proportion of a grain to the drachm of distilled water without precipitation. But two or four grains of these substances, with an equal amount of benzoate of soda, can be readily given as in the following formula:

R.—Caffeine,  
Sodii benzoati, . . . . . āā gr. xv.  
Elix. aurantii,  
Aq. dest., . . . . . āā ʒij.

Sig.—Teaspoonful dose.

The drug is, however, very efficient when used in pill form.

I append a few cases which illustrate the extensive possibilities of caffeine:

CASE I.—A vigorous man of 23, ruddy complexion, in the habit of using alcohol freely, was brought into the Philadelphia Hospital suffering from delirium tremens. There was very rapid, tumultuous, and ineffective action of the heart from the toxic effect of alcohol. Dropsy of the feet. No organic

heart disease. Digitalis tried, and found unsatisfactory. Caffeine, 2 grs. four times daily, promptly effective in augmenting the systole. Within a week its full effect seemed to have been secured. No regulative power was observed, the heart's action continued rapid, and finally became normal when the general balance of the nervous system was restored.

CASE II.—A woman of 65 years. Dilated and fatty heart, with mitral regurgitation, hydrothorax, general anasarca, ascites. Was admitted to hospital August 1st, and in the interval to November 1st was tapped three times; and various diuretics, always accompanied by digitalis, were given. November 1st she was placed on 4 grs. of caffeine in pill three times daily, and within two weeks a veritable transformation had occurred. Dropsy vanished, and the cardiac systole greatly improved. At date, condition still satisfactory. Caffeine discontinued.

CASE III.—Boy of 10 years, with mitral disease, dilated hypertrophy of all the chambers of the heart, influenced by the lesion; ascites. This patient has been under my care for five years. No drug that I have ever used has proved so satisfactory and rapid in its influence as caffeine.

CASE IV.—Emphysema and cardiac dilatation; and under my observation for several years, finally threatened with evils of cardiac failure, and uræmia imminent. Most satisfactory results from the use of caffeine.

CASE V.—Atheroma and aneurism by dilatation. Dilated hypertrophy, with fatty and feeble heart. Digitalis not well borne on account of the pathological changes in the aorta. Jaundice and other evidences of cardiac failure, and venous repletion. Very favorable results from caffeine.

## ON SURGICAL TUBERCULOSIS.

BY R. J. HALL, M.D.,  
OF NEW YORK.

(Concluded from page 99.)

### IV. Miscellaneous Tuberculoses.

CASE I. *Tuberculosis of the Tongue*.—February, 1884. Amputated in 1881. Old alcoholic preparation. Microscopic examination shows diffuse tubercle, containing many giant cells and extensive cheesy degeneration. Five preparations: four negative; in one a giant cell contains three bacilli, and two others contain two each. This case is of interest as confirming the observation made by Vidal, and referred to above, that the bacilli can be found in old preparations. I am inclined to think, however, that many bacilli had undergone some change which interfered with the staining, for the sections examined were very large, and a really enormous number of giant cells had been carefully gone over before these very few bacilli were found; while Koch<sup>87</sup> in two cases of tubercular ulcer of the tongue found large numbers.

CASE II. *Pus drawn with Hypodermic Syringe from Abscess in connection with Tubercular Orchitis*.—Two preparations: fuchsine; one negative; one contained four bacilli.

**CASE III. Pus from Cold Abscess of the Right Iliac Fossa.**—Occurring in a young woman, with symptoms pointing to caries of the lumbar vertebræ. Pus allowed to settle and sediment taken. Five specimens: violet and brown; two negative; one contains four, one two, and a third one bacillus.

**CASE IV. Pus from Cold Abscess, connected with Tubercular Arthritis of Shoulder.**—Boy, æt. 15, disease of four months' duration. Pus drawn with hypodermic and allowed to settle. Eight specimens: violet and brown; five negative; in one, one bacillus; in each of the remaining, two found. In several of the specimens large spores, exactly resembling those described and figured by Koch,<sup>88</sup> were seen stained violet; the only difference from those mentioned by Koch being that no uncolored spores of the same size were seen. The pus had stood more than twenty-four hours before being spread on cover-glasses. This is the only occasion on which I have seen such spores. They are not, of course, supposed to have anything to do with the tubercular process, and are only of interest because they stain in the same way as the bacilli. What are generally believed to be the spores of the tubercle bacillus are only to be seen as minute unstained interruptions in the stained body of the bacillus. As they cannot be stained in any known way they may, of course, exist in large numbers in tissues or fluids without our being able to appreciate their presence, and this affords a plausible explanation of the fact that material in which few or no bacilli can be found, such as cheesy substances, often possesses most virulent infecting properties. I have examined the sediment of urine in a number of cases of pyelitis, supposed to be tubercular, without finding the bacilli in any of them.

The small number of cases in which I have made examinations of pus, is due to the fact that Schlegtendal<sup>89</sup> had already made extensive observations in this direction. It was obvious almost from the first that the examination of sections for diagnostic purposes could find but a very limited application on account of the time and labor required for preparing and examining them. With pus, however, which can usually be obtained before operation, and is dried on cover-glasses like sputum for examination, the process is a much simpler one, and could the bacilli be found with any certainty, it would be a valuable resource in doubtful cases. In forty cases of tubercular bone, joint, and glandular disease, in which the abscesses had not yet been opened, Schlegtendal<sup>89</sup> obtained positive results in only seventeen. In fifty-five cases of tubercular fistulæ communicating with bones, joints, glands, and the urinary apparatus, with five of tubercular ulcers of the skin, he obtained only nine positive results.

The most, therefore, that we can say, is that in a certain number of cases the discovery of the bacilli may give us certainty, while the failure to find them offers no presumption against the tubercular character of the disease. Something, I think, is gained by letting the pus settle for several hours, and examining the sediment.

Although Friedländer,<sup>90</sup> Rosenstein,<sup>91</sup> M. Babes,<sup>92</sup> and Kredic,<sup>93</sup> have found the bacilli in the sediment

of the urine of patients suffering from genito-urinary tuberculosis, my own results lead me to believe that it will prove of little more value here than in fistulæ and ulcerations.

#### V. Tubercular Epididymitis.

Man, æt. 50. Disease first noticed three months ago, and suppuration had occurred rapidly. Castration, July 22, 1884.

Inoculation of guinea-pig subcutaneously in abdomen with tubercular material. Wound of inoculation closed perfectly. Within two weeks a sluggish ulcer had formed; inguinal glands became rapidly enlarged. Sept. 7, enlarged inguinal gland excised. It is almost entirely caseous and broken down in the centre.

Examination of cheesy matter on cover-glasses shows considerable numbers of bacilli (violet and brown). This case illustrates the ease with which inoculation can be used for diagnostic purposes. The actual operation takes but a few minutes, and the bacilli occur in such numbers in the caseous lymphatic glands that the demonstration is as rapid and simple as in sputum. Only in lupus it seems that, probably on account of the very small number of bacilli, inoculation may frequently give no result. Though even here, as Koch has obtained such uniform results, it is possible that the failures depend on errors in manipulation.

Besides those already mentioned, the most important reports on the discovery of tubercle bacilli in surgical lesions are the following:

Schuchardt and Krause,<sup>94</sup> already referred to, demonstrated the bacilli in ten cases of synovial and three of bone tuberculosis; in the lining membrane of fourteen tubercular abscesses, none being found in the pus which they examined from four of these; in three cases of tubercular glands, three of tubercle of the skin and lupus, one of the sheaths of the tendons, and one of the muscles. In all these the bacilli occurred very sparingly. In a tubercular nodule in the tongue, a tubercular testicle, and two cases of tubercular disease of the female genital organs, on the other hand, the bacilli were very abundant. Bacilli were found in all the tubercular lesions they examined. Demme found bacilli in two cases of ozæna scroph., as well as in the three cases of lupus mentioned before. Chiari<sup>95</sup> found them in pus from carious disease of the vertebræ, and from tubercular cervical lymphomata. Celli and Guarneri,<sup>96</sup> in scrofulous lymphatics; they also made successful inoculations from these, but failed to find any bacilli in three tubercular joints and four cases of lupus. Brouilly<sup>97</sup> found them in an abscess of the epididymis, a fungoid tendo-synovitis, a tubercular abscess of the thorax, and a fungoid osteitis of the rib, very sparingly in all. Wesener,<sup>98</sup> in two tuberculosis of the testicle and epididymis, two of the female genital organs, two of the bladder, and in pus from a tubercular ulcer of the neck. F. Marchand<sup>100</sup> found it difficult to find the bacilli in fungoid joint diseases, and in pus from the same. Debove<sup>101</sup> found them in pus from tubercular epididymitis, a presternal and a costal abscess. W. Müller<sup>102</sup> found the bacilli, as a rule, in thirty to



thirty-five cases of fungoid disease of bones and joints. He found none in a number of cases, even after examining twenty or more preparations, and these were especially such as were undergoing spontaneous cure. In four cases, the bacilli occurred in very large numbers. Coze and Simon<sup>100</sup> have seen them in the granulations of fungoid joint disease, and sometimes in pus from the same; also in the purulent discharge from the uterus of a patient with pulmonary tuberculosis. Kanzler<sup>101</sup> in four cases of osteomyelitis and osteosynovitis, and fourteen times in pus from thirty-one cases of tubercular disease, including suppurating lymphoma (7, -2 positive), bone and joint disease (13, -8 positive), ulcers of skin (7, -4 positive), of nasal mucous membrane (2, negative), and suppurative otitis media (2, negative). Gondolphe<sup>102</sup> found them in pus from cold abscess in fungoid disease of bone and joints, tubercular epididymitis, and renal tuberculosis. M. Hanat<sup>103</sup> publishes a case of panaritium, either originally tubercular, or, as suggested by a reviewer, possibly infected by the bistoury used to incise it, and followed by a tubercular ulcer of the forearm; in the pus and in sections large numbers of bacilli were found.

Koch,<sup>104</sup> besides the cases already referred to, has examined 13 of joint and 10 of osseous tubercloses, finding the bacilli in all, and failing to find them only in pus from 1 case, in which, however, inoculation was successful. He found them further, very sparingly, in 5 tubercular testicles; very abundantly, on the other hand, in four cases of tuberculosis of the pelvis of the kidney, 1 of the bladder and urethra, 1 of the suprarenal capsule, and 1 of the uterus and tubes. No bacilli were found in the pus from an abscess of the kidney, but inoculation gave a positive result. Eschle<sup>105</sup> has found abundant bacilli in the discharge from two cases of suppurative otitis media, both patients having pulmonary tuberculosis. Voltolini<sup>106</sup> describes a similar case, the bacilli being also very abundant. The same author<sup>107</sup> also found bacilli in three cases of pharyngeal tuberculosis, all accompanied by tubercular disease of the lungs or larynx, and mentions that he usually finds them in the secretion from laryngeal ulcers. In a later<sup>108</sup> publication he gives in detail an interesting case of a child of five years, in whom the first symptom was the appearance of bilateral cervical lymphomata, followed by hoarseness, and later, aphonia. Only the swollen epiglottis could be seen laryngoscopically, and a certain diagnosis was made only by the discovery of tubercle bacilli in the secretion. B. Fränkel<sup>109</sup> had some time previously announced the regular occurrence of the tubercle bacilli in the secretion from tubercular laryngeal ulcers, having found them in twenty-two cases examined during life, and five after death. During the discussion which followed the reading of Fränkel's paper, Lewin<sup>110</sup> stated that he had succeeded in finding the bacilli in the same way. Some doubt was thrown on the reliability of Fränkel's observations by Friedländer, because in the preparation presented to the Society no tubercle bacilli were to be seen. The preparation, however, was some weeks old and faded, and at the next meeting of the Society, Fränkel was able to make a satisfactory demonstration of a number of preparations. Gutt-

mann<sup>111</sup> has recently reported two cases of tubercular ulcers of the soft palate, in both of which immense numbers of bacilli were found.

In a review of the literature given above, it will be seen that, as a rule, the bacilli are abundant in tubercular lesions of mucous membranes and internal organs, while they are found very sparingly in those of the skin, bones, and joints; a rule, however, not absolutely without exceptions. Two important practical subjects remain to be considered, namely, the means of diagnosis at the command of the surgeon, and the indications for treatment.

For the first, as a rule, the clinical diagnosis is not difficult. All that we have been accustomed to consider scrofulous must be classed as tubercular, with the exception, probably, of those superficial affections of the skin and mucous membranes, which are rather diseases of the scrofulous than scrofulides. No doubt, also, further observation will show the presence of the bacillus in some of these apparent exceptions.<sup>112</sup> But far more than this must be included. Its forms are so various, and its course so dissimilar in different cases, that sometimes before operation only a probable diagnosis can be made, and that largely by exclusion. We must be prepared to recognize tubercular lesions of the bones, the joints, the skin, etc., in both children and adults, who, except for this one affection, present all the appearance of the most blooming health. We must be prepared to find it running an acute course, in a bone or joint, for instance, producing, in a few days or weeks, an amount of disorganization that would ordinarily require months or years, and again existing in the same situation for the greater part of a lifetime, and scarcely causing derangement of function.

Usually the gray, gelatinous, miliary tubercle, either on the surface of a membrane or scattered through the tissues, with here and there white specks, denoting caseous degeneration, can be readily recognized with the naked eye. Not very infrequently, however, cases will occur in which neither clinically nor on microscopical examination a certain diagnosis can be made. The question then arises, Have we any simpler means than the tedious and difficult examination for the usually small number of bacilli? It is quite certain that neither the epithelioid nor the giant cell is characteristic of tubercle.<sup>113</sup> While it may be true, as Ziegler states, that "for the later stages of the tubercle, nodule caseation is characteristic,"<sup>114</sup> yet this is not always present, and closely similar degenerations occur as the result of so many pathological processes that it cannot be relied on for the diagnosis.<sup>115</sup> Giving up, then, as has been done in regard to all other pathological processes, the idea of a specific cell form, pathologists have fallen back upon the characteristic structure of the tubercle. This consists, as defined by Ziegler,<sup>116</sup> in "a non-vascular nodule (knötchen), which does not grow beyond a certain size, and, having attained a certain stage of development, undergoes cheesy degeneration." We may add to this, as Ziegler does a little further on, that usually many of the cells are epithelioid, and that the nodules usually contain one or more giant cells. Even this characteristic structure, or something very similar, can be produced by the irritation of various

foreign bodies, if we may rely on the statements of Baumgarten<sup>120</sup> and the experiments of H. Martin,<sup>21</sup> who claim to have produced, by the action of various irritant foreign bodies, a structure histologically identical with true tubercle, and differing from it only in being non-infective.

Be this as it may, however, the fact remains that before the discovery of the tubercle bacillus the whole domain of tubercular lesions had been mapped out entirely by the aid of histological criteria; and that since Koch's discovery the bacillus has not been found except in tissues presenting the characteristic structure, nor, so far as investigations extend at present, has the bacillus been wanting in any form of the disease which had been classed as tubercular on anatomical grounds.

Practically, therefore, the simple microscopic examination of the tissue affords a perfectly reliable and simple means of diagnosis. Where sufficient material cannot be obtained for the purpose, we can only have recourse to inoculation, or to the method described by Unna,<sup>122</sup> who found that by partially digesting hardened specimens and examining the precipitate that had fallen, the bacilli were observable in quantity.

As regards treatment, the discovery of the bacillus has taught us, when local recurrence takes place after operation, to seek for the cause, not in any mysterious predisposition of the tissues to tubercular inflammation, but in the failure completely to remove the infecting material. As for any specific action by internal treatment, we are apparently further from success in this direction than ever. Buchner<sup>123</sup> and Kempner<sup>124</sup> have, indeed, reported favorable results from the treatment of pulmonary tuberculosis by arsenic, and Landerer<sup>125</sup> and Von Langenbeck<sup>126</sup> in a small number of cases of fungoid disease. Stintzing,<sup>127</sup> on the other hand, in sixteen cases of phthisis, most carefully observed, found practically no benefit at all. Parrot and Martin<sup>128</sup> found the bacillus more resistant than that of splenic fever. Solutions of corrosive sublimate, salicylic acid, superoxygenated hydrogen, bromine, quinine, and creasote, in the strength of 1 to 1000, were useless. Carbolic acid solution, 3 per cent., was effective only after forty-eight hours, and 6 per cent. failed in twenty-four hours. With these data in view, I am inclined to receive Doutrelepon's<sup>129</sup> report of favorable results in lupus, from the application of 1 to 1000 corrosive sublimate, with great reserve. Koch<sup>130</sup> gives the following result of his and Gaffky's experiments in this direction:

"At different times rabbits received injections of pure cultures (of tubercle bacilli) in the anterior chamber of the eye in order to test the influence of substances which interfere with the development of the tubercle bacillus. Besides numerous other substances, arsenic, helenin, and sulphuretted hydrogen, were administered to the animals, and always in the largest possible doses, and for weeks at a time. We have not been able to observe a favorable action by any substance in a single case. All the animals died tubercular, just as rapidly as those which were not treated." Koenig,<sup>131</sup> moreover, after stating that he has for years past carefully tested the different agents

recommended, especially iodine, mercury, and arsenic, and that none of them has shown anything like a specific action, continues: "In no single case have I been able to determine that arsenic had a permanently good or bad influence on the course of the disease, whether situated in the joints, in the skin, or in the kidneys." Invaluable as iodoform still proves as a dressing, especially after operation in tubercular cases, it certainly has not satisfied the expectations excited by Mosetig-Moorhofs<sup>132</sup> and Mikulicz's<sup>133</sup> earlier publications. Although Marchand,<sup>134</sup> by proving that iodoform causes the rapid disappearance of giant cells from the inflammatory products surrounding foreign bodies, has given some anatomical evidence in favor of a possible special action of iodoform on granulations containing these, yet the fact that even those surgeons who use iodoform most extensively, demand at the same time the complete extirpation of all tubercular tissue, does not speak strongly in favor of a specific action.

On the other hand, a more intimate acquaintance with the course of tubercular processes, and especially the observations of Baumgarten,<sup>135</sup> who, in about every third or fourth cadaver, dead from other causes than tuberculosis, finds some vestiges of tubercle, prove that it is by no means always the malignant process that observation of only the more acute cases would lead us to believe, that in fact many cases tend to spontaneous recovery. I am inclined to think myself that, in most cases, the course which the disease will take is settled from the first, either by the nature of the soil, or the amount of the infecting material, and that it is far less influenced by treatment whether general or local, other than operative, than surgeons generally suppose. When the specific character of the disease was first recognized, and the frequency noted with which subjects of fungoid or other local tubercular processes fell victims to acute miliary or pulmonary tuberculosis, it was but natural that surgeons should have advocated early operative interference for the sake of prophylaxis.<sup>136</sup> This ground has been completely cut away by the statistics of Koenig,<sup>137</sup> already mentioned, according to which in 79 per cent. of all cases of tubercular bone and joint diseases examined, older tubercular deposits were found as the probable source of infection. Baumgarten's work, cited above, makes it probable that in a still larger percentage of cases the surgical affection is secondary. The failure of these too sanguine expectations, the small but nevertheless noticeable number of cases in which acute tuberculosis directly follows operative interference,<sup>138</sup> and above all the frequency of local recurrence, added to the often unsatisfactory results as to function after resection of joints, have caused a decided reaction in favor of more expectant treatment. Now, as before, however, we possess but one means of limiting or cutting short the local tubercular processes that is, the complete extirpation of all the diseased tissue, as advocated by German surgeons in general, and especially by Volkmann, in 1879,<sup>139</sup> and recently at Copenhagen;<sup>140</sup> and as improvements in operative technique and wound dressings diminish day by day the dangers, and render results more certain and satisfactory, we will, I am confident, have recourse

more and more frequently to early and radical operation.

## BIBLIOGRAPHY.

87. Mittheil., Bd. ii. S. 36, 1884.—88. Mittheil., Bd. ii., 1884, S. 12, Taf. 5, Fig. 23.—89. Fortschritte der Medicin., 1883, No. 17.—90. Mikroskopische Technik., S. 117, found only in urine taken from the cadaver.—91. Centralbl. für die Med. Wissensch., 1883, No. 5.—92. Progrès Méd., 1883, No. 9.—93. Ref. by Marchand, Deutsche med. Wochenschr., 1883, No. 15.—94. Fortschritte der Med., 1883, No. 9.—95. Berl. klin. Wochenschr., 1883, No. 15, Tuberkelbacilli im Kindesalter.—96. Prog. med. Wochenschr., 1883, No. 1; ref. in Cent. f. klin. Med., 1883, No. 12.—97. Ref. in Cent. f. klin. Med., 1883, No. 34.—98. Rev. de Chir., 1883, No. 11.—99. Deutsche Arch. f. klin. Med., Bd. xxxiv. S. 583.—100. Deutsche med. Wochenschr., 1883, No. 15.—101. Le Progrès Médical, 1883.—102. Centralbl. f. Chir., 1884, No. 3.—103. Bull. Gén. de Therapeutique, 1884, p. 241.—104. Berl. klin. Wochenschr., 1884, Nos. 2 and 3.—105. Lyon Médical, 1884, No. 18.—106. Bull. de la Soc. des Hôp., 1884.—107. Mittheil., Bd. ii., 1884.—108. Deutsche med. Wochenschr., 1883, No. 30, Tuberkelbacilli in dem Ausflusse bei Mittelohreiterungen von Phthisikern.—109. Deutsche med. Wochenschr., 1884, No. 2.—110. Breslauer Aertlich. Zeitschr., 1884, Nos. 7 and 8; ref. in Centralbl. f. klin. Med., 1884, No. 30.—111. Deutsche med. Wochenschr., 1884, No. 24.—112. Berl. klin. Wochenschr., 1884, No. 4.—113. Berl. klin. Wochenschr., 1884, No. 3, Verhandl. der Berlin Med. Gesellschaft.—114. Deutsche med. Wochenschr., 1884, No. 21.—115. Unna recognizes four affections of the skin, due to the tubercle bacillus: lupus vulgaris, tuberculosis cutis (Kaposi), lupus papillaris (Alibert), and *scrofulous eczema*, followed by caseous glands. Brit. Med. Journ., 1884, Aug. 30, p. 426, Report of Internat. Med. Congress, 1884, Depart. of Dermat. and Syph.—116. Ziegler, Lehrbuch d. Allgem. and Spec. Patholog. Anatomie, 2 Aufl. 1 Theil, S. 179. See also Virchow's Arch., 95, H. 2, S. 249, Dr. Edw. Kraus, Beiträge zur Riesenzellenbildung in Epithelialer Gewebe; and Virchow's Arch., 93, H. 3, S. 518, Dr. Emil Marchand, Ueber die Bildungsweise der Riesenzellen um Fremdkörper und den Einfluss des Iodoforms Hierauf.—117. Ziegler, Op. cit., S. 178.—118. See Virch. Arch., 97, H. 1, S. 21, Baumgarten, Miliare Gummigeschwülste der Milz, Nebst Bemerkungen über die Anathistol. Differential Diagnose Zwischen Gummata und Tuberkeln.—119. Ziegler, Op. cit., S. 179.—120. Virch.

Arch., 97, H. 1, S. 29, Miliare Gummigeschwülste der Milz, etc.—121. Arch. de Physiologie, 1881, tome vii. p. 131, Tuberculeuse des Sereuses et du Poumon, Pseudo-tuberculose Experimentale; and Arch. de Physiol., 1881, tome viii. p. 49, Nouvelles Recherches sur la Tuberculose Spontanée et Experimentale des Sereuses. See also Ziegler, Exper. Untersuch. über die Herkunft der Tuberkel-elemente, Würzburg, 1875; and Untersuch. über Patholog. Bindegewebs und Gefassneubildung, Würzburg, 1876; ref. in Lehrbuch, 2 Aufl. 1 Theil, S. 162.—122. Internat. Med. Congress, 1884, Section in Dermat. and Syph., report in Brit. Med. Journ., Aug. 30, 1884, p. 425.—123. Die Ätiologische Therapie und Prophylaxis der Lungentuberculose, München and Leipzig, 1883; ref. in Fortschritte der Med., 1883, No. 18, S. 590.—124. Ueber die Behandlung der Tuberculose mit Arsen, Berl. klin. Wochenschr., 1883, No. 31.—125. Centralbl. f. Chir., 1883, No. 47.—126. Berl. klin. Wochenschr., 1884, No. 19, S. 301.—127. Zu Buchner's Ätiologischer Therapie der Lungentuberculose Aertliches Intelligenzblatt, 1883, No. 30; and Centralbl. f. klin. Med., 1883, No. 32.—128. Rev. de Méd., 1883, No. 10.—129. Monatsh. f. Prakt. Dermat., 1884, No. 1; ref. in Centralbl. f. klin. Med., 1884, No. 14.—130. Mittheil., Bd. ii. S. 69. See also Schill and Fischer, Ibid. S. 131, Ueber die Desinfection des Auswurfs der Phthisiker Sputum, treated in different ways and tested by inoculation. Five per cent. carbolic acid solution effective on bacilli and spores in twenty-four hours. No other disinfectant, even very strong, including 1 in 500 corrosive sublimate solution, of value. Fränzel, Verhand. des 2 Congresses f. Innere Med. ueber Tuberc., Cent. f. klin. Med., 1883, No. 37, used inhalations on human subjects of menthol, camphor, naphthaline, creasote, aniline, crude carbolic, and mercury, without result. Hiller (Ibid.) used inhalation of gases, steams, sprays, parenchymatous injections in lung, subcutaneous injections, and in administration of different substances, including corrosive sublimate, iodoform, bromine, ethyl and methyl alcohol, arsenious and boric acids, with no effect on the process in the lung or on the bacilli.—131. Tubercul. der Knochen und Gelenke, Berlin, 1884, S. 89. See also Fortschritte der Med., 1883, No. 21, die Käsig Pneumonie, Speciell die Sogen. Hüttenrauch Pneumonie oder Hüttenrauch-tuberculose des Rindes, remark on p. 690.—132. Volkmann's Samml., No. 211, Der Iodoform Verband.—133. Langenbeck's Arch., 27, S. 196, Ueber die Verwendung des Iodoforms bei der Wundbehandlung und Dessen Einfluss auf Fungöse und Verwandte Processe.—134. Virchow's Arch., H. 3, 93, S. 518, Ueber die Bildungsweise der Riesenzellen um Fremdkörper und den Einfluss des Iodoforms Hierauf.—135. Volkmann's Samml., No. 218, Ueber Latente Tuberculose.—136. Hueter, die Scrophulose und Ihre Locale Behandlung als Prophylaxe Gegenüber der Tuberculose, Volkmann's Samml., No. 49; and Wiener med. Wochenschr., 1882, No. 19, Ueber Behandlung der Lymphome.—137. Tuberc. der Kn. und Gel., 1884, S. 33.—138. Koenig, Tuberc. der Knochen und Gel., 1884, S. 46; and Charvot, de la Tuberc. Chirurg., Rev. de Chir., 1884, No. 9, p. 736.—139. Ueber den Char. und die Bedeut. der Fung. Gelenkentzünd, Volkmann's Samml., 168-9.—140. International Med. Congress, 1884.

\* See, also, Zeitschrift. f. Ohrenheilkunde, Bd. xiii. S. 202. A. Gottstein, die Bisherigen auf das Vorkommen von Tuberkel-bacillen bei der Otorrhoe Gerichteten Untersuchungen, etc.

† See, also, Orvosi Hetilap, No. 32, 1882, ref. in Centralbl. f. Chir., 1883, No. 51. V. Babes, Tuberkel-bacillen in der Scheide, in der Urethra, in Geschwüren Circa Anum, und der Lippe. The ulcer of the vagina and lip were in the same patient; bacilli abundant in all; and tubercular serous effusions. MM. Chauffard et Gombault (Bull. et Mém. de la Soc. Méd. des Hôpitaux, ref. in Lancet, August 30, 1884) inoculated 23 guinea-pigs with serous, sero-fibrinous, or purulent effusions, of tubercular character, from pleura or peritoneum of 21 patients; inoculations intraperitoneal: 4 guinea-pigs died rapidly; 9 showed no tubercles after 34 months; 10 tubercular, and bacilli in all; no bacilli found in the effusion.



## MEDICAL PROGRESS.

**CANCER OF THE THYROID BODY.**—M. MARCHAND, in the *Gazette Hebdomadaire* of Dec. 26, 1884, reports a case of cancer of the thyroid body, which is interesting on account of its rarity, the peculiarity of its progress, and the symptoms to which it gave rise. The patient was a woman thirty-two years of age, without hereditary taint of any kind. She had always had a large neck. At the time when she first came under the notice of M. Marchand, a tumor of the size of a hen's egg was discovered on the right of the median line. Its appearance was first noticed six months previously. In contrast with the cases heretofore published, in which a rapid progress has been noticed, complicated with disturbances due to the compression of the œsophagus, the tumor was developed slowly, and the respiratory function alone was interfered with. Dyspnoea, at first temporary, finally, at the end of six months, became constant. Accurate examination was impossible, as pressure produced marked stenosis of the trachea.

Treatment with potassium iodide gave only temporary relief. Thyroidectomy was then decided upon in preference to tracheotomy. A longitudinal incision was made extending to the sternal notch. The tumor thus exposed was of a reddish-white color traversed by large vessels, perfectly circumscribed, but enveloped in a dense fibrous tissue, from which it was difficult to isolate the vessels. Ligatures were applied above and below, and the tumor was excised between them. The trachea was found intact. The edges of the wound were united by metallic sutures and the wound rapidly healed, and the woman left the hospital in three weeks.

The tumor was very large, projecting nearly four inches, and having a circumference of nearly ten inches. Microscopical examination showed it to be cancerous. After three months, there are no signs of return, either local or general. Rose, up to 1879, only could collect three cases of thyroidectomy, all followed by death. Billroth has since had three cures—two temporary, of two years' duration, and in a third there has been no return, two years after operation.

**CLINICAL OBSERVATIONS UPON DIPHTHERIA.**—DR. LUDWIG STUMPH, in an exhaustive clinical study of diphtheria, extending over a period of twelve years, concludes as follows:

Diphtheria of the throat, nose, vagina, conjunctiva, and of the mucous membrane of all the external air-passages, is primarily a purely local disease. This primarily local disease can, in its further progress, lead to a general infection of the body. From the local nature of the disease, it is manifest that local treatment alone, and thus the subjugation of the disease at its primary point of appearance, will perfectly fulfil the present scientific aspects of its nature. By thorough and early local disinfection, for which inhalation offers the best therapeutic means, all that is possible is accomplished.

Against universal infection there is at present no remedy. It is possible that we shall eventually find a substance which, without injury to the blood and the vitality of the tissues, will exert a germicide effect upon the organism in the blood, though at this time there is no prospect of such discovery. The task of the physi-

cian is to pay attention to the primary local disease, and to concentrate the treatment upon this, and this must be the principal aim of his labor.—*Deutsches Archiv für klin. Medicin*, Dec. 1884.

**TREATMENT OF CHOLERA.**—As the result of extended observations upon Asiatic cholera, made during the recent epidemic, DR. OSCAR GIACCHI gives, in the *Gazzetta Medica di Torino*, of Dec. 24, 1884, the following conclusions as to the best treatment of the disease:

1. In true Asiatic cholera, when once an algid condition or a state of asphyxia is present, medication is useless; or, at least, is no more to be relied upon than are the simple natural powers.

2. Medication in the first stages of the disease, when the infection has not yet poisoned the blood and prostrated the nervous system, is often effective.

3. Laudanum is the remedy *par excellence* in the disease, perhaps the only one which will control the intestinal watery discharges due to intestinal hypersecretion.

4. Stimulants generally, and alcohol in particular, are valuable as a means of support till reaction has set in.

5. Notwithstanding the doubtful results of treatment of the disease in the advanced stages, all symptoms should be met as they arise.

6. A symptom most important to recognize, is the algid state which precedes central paralysis. In this condition, the hot bath must be resorted to, and renewed as often as required; likewise stimulants, alcoholic and non-alcoholic, and artificial heat should be used.

7. After the advent of the algid stage, vomiting usually follows, which further prostrates the powers of the patient; and by preventing the retention of medicines in the stomach, diminishes the chances of recovery. The best remedy for this condition is chloroform, in doses of from twenty to thirty drops in some stimulating vehicle, or mixed in effervescent lemonade.

8. Cholera which has completely developed cannot be directly cured by any means, and should not be treated by theoretical specifics.

9. Prophylactic measures, during the presence of an epidemic, to prevent the spread of the disease, are better than medical treatment, however skilfully directed.

**CANCER OF THE EYE.**—An important study of cancer of the eye has just been completed by M. GUSTAVE DRON. The work contains an extended observation upon a case of sarcoma of the choroid, reported to the author by M. Alp. Desmarres; a study of cancer of the globe; and finally, a general discussion upon the nature of the different varieties of cancer and their etiology. The case of choroidal sarcoma was diagnosed at its first appearance, operated upon, and at the end of five years has not returned. Showing clearly the symptomatology of cancerous growths, and the mode of distinguishing them, M. Dron insists especially upon the radical treatment of the disease, which consists in the complete extirpation of the eye and all its appendages, if the growth has at all invaded them. Considering the subject from a practical standpoint, he regards histological distinction as of only minor importance.—*Gazette Medicale de Paris*, Dec. 27, 1884.

**THE COMBINED ACTION OF ANTIPYRIN AND KAIRIN.**—In a memoir upon the combined action of antipyrin and kairin, DR. G. MINGAZZINI publishes some extended observations. The diseases in which the effect of the drugs was noted are phthisis, catarrhal pneumonia, typhoid fever, and croupous pneumonia. In each case satisfactory effects were obtained. The doses employed varied from 8 to 30 or 40 grains of each drug. As the result of his experience, Dr. Mingazzini offers the following conclusions:

1. The ingestion of a mixed dose of antipyrin and kairin produces a much greater reduction of temperature than if an equal quantity of antipyrin alone is administered.
2. The ingestion of a mixed dose of these two drugs usually results in an immediate reduction of temperature, which continues much longer, *cæteris paribus*, than when antipyrin alone is administered.
3. Kairin, administered with antipyrin, does not produce any of the untoward effects which are observed when it is administered alone.—*Gazetta degli Ospitali*, Dec. 1884.

**THE THERMO-CAUTERY IN THE TREATMENT OF SPONTANEOUS GANGRENE.**—DR. DESSETTE publishes in the *Journal de Méd. de Paris*, Jan. 3, 1885, a case of gangrene of the left foot, incident to diabetes mellitus, which was successfully treated with the thermo-cautery. The case is of interest from two points of view:

1. It shows the influence of alcohol in producing gangrene in diabetics. Gangrene of the extremities is not frequent in diabetics—one case in fifty being unusual—and, what is remarkable, the case exists in connection with alcoholism, having required, as it seems, a double diathesis—the alcohol-diabetic, to cause the gangrene.
2. It presents an instance of cure without recourse to the bistoury. The diseased parts must be thoroughly cauterized as the gangrene progresses; and, though the patient may thus lose one or more toes, or the foot itself, he is finally cured.

**HYDROCELE IN THE FEMALE.**—HENNIG, of Leipzig, read a paper on this subject before the Society of German Naturalists and Physicians, in Magdeburg.

Hydrocele in the female, he said, is very rare; he has been able to find only thirty-nine cases recorded in literature, and has had two cases in his own practice. Apart from their interest to the gynecologist, these cases merit the attention of accoucheurs, as hydrocele may render delivery very difficult, or even impossible; furthermore, the exudation, by passing up the inguinal canal into the abdomen, during labor, may cause peritonitis; three instances of this accident are recorded. It may also cause sterility; a case is reported in which sterility of fourteen years' standing was cured by removal of the hydrocele. Zuckerkandl made post-mortem examinations of the bodies of nineteen young girls, the ages ranging from one to twelve years; in four cases he found the so-called Nuck's diverticulum, bilateral in three cases. If the hydrocele communicates with the abdominal cavity, the contents may be forced out into the cavity. In many cases small sacs are found in the course of the round ligaments; they are liable to occur after traumatism, and to become inflamed.

Hydrocele occurs from the seventh to the seventieth year, and is more frequent in women who have borne children than in nulliparae. In 8 cases it was on the right side, in 6 on the left, in 2 it was bilateral. Of 40 cases, the hydrocele completely filled the canal in 25; of these, 3 did not communicate with the abdominal cavity, and 15 were closed cysts. In 5 cases the fluid was bloody.

The affection begins painlessly. At first the swelling is slight, and disappears on lying down. Though there is seldom any fever at first, it comes on when the hydrocele becomes inflamed, which may occur from excessive tension. Erysipelas has also been observed before an operation. Hydrocele in the female has been mistaken for hernia; the diagnosis can be easily made in some cases by the use of the aspirator needle. The hydrocele has been known to suppurate in a few cases, but the suppuration has never extended to the abdomen. Of 28 cases of hydrocele, 23 were cured, and the hydrocele returned in 5 cases. The treatment consists at first in placing a bandage over the sac, and later in making an incision and filling the sac with charpie.—*Centralbl. für Gynäk.*, Oct. 11, 1884.

**TREATMENT OF RACHITIS BY PHOSPHORUS.**—DR. SCHWECHTEN, at a late meeting of the Berlin Medical Society, communicated his observation upon the treatment of rachitis by phosphorus.

According to Kassowitz, rachitis is the result of an inflammation of the bones and of the production of an osteoid substance deprived of the calcareous salts. He has produced in animals, by giving them continuously large doses of phosphorus, symptoms very analogous to those of rachitis, and has noticed that very small doses diminish the vascularity of newly formed osseous tissues and their tendency to rachitis, whence originated the treatment he so highly praises and which has given such brilliant results. M. Schwechten has not confirmed these results by his own experiments. He administered the phosphorus in an oily solution in doses of  $\frac{1}{18}$  of a grain daily, as directed by M. Kassowitz. Forty-one patients were treated by this method; four were cured, twelve were decidedly benefited, nine moderately improved, eleven experienced no change, five grew worse, and eight died, giving a total of twenty-five successes and sixteen failures. Dr. Schwechten, therefore, does not consider phosphorus a specific for rachitis, and holds that the drug is only directed to one set of symptoms of the disease. Notwithstanding the contrary opinion of Kassowitz, he considers rachitis a general disease affecting other than bony tissues. Dr. Schwechten holds the view that improper hygienic conditions frequently cause the development of rachitis, and that the disease may be ameliorated and even cured by the simple substitution of good for bad hygienic surroundings.—*L'Abeille Médicale*, Jan. 5, 1885.

**AN EXTRAORDINARY CASE OF LABOR; PUTREFACTION OF THE FÆTUS.**—DR. R. DE SAINT-MOULIN, in the *Journal d'Accouchements de Liège*, Nov. 30, 1884, reports a remarkable accouchement. The patient was a primipara in labor at term. The belly was enormous, swollen excessively, and tympanitic over its entire surface. Palpation gave no information, owing to the ex-

cessive distention. Auscultation also gave negative results. By touch, the head of the child was felt, filling up the neck of the uterus, like an enormous thrombus. Labor had been in progress four hours, but the woman did not know when the bag of waters had ruptured. Her condition was very grave; respiration difficult and superficial; pulse small and thready; face wrinkled; painful and continued oppression in the abdomen. The forceps were applied and the head, very far advanced in putrefaction, was delivered. Efforts to deliver the remaining parts were in vain.

Saint-Moulin then attempted to deliver the shoulders with the hook, and in so doing both arms of the fœtus were torn off, as also the head, and the same accident happened when an attempt was made to deliver the lower limbs. To deliver the trunk, it was necessary to perforate the abdomen of the fœtus to permit the escape of the gas there collected. The after-birth was delivered immediately, and the woman died shortly after.—*Archives de Tocologie*, Jan. 1885.

**TREATMENT OF PRURITUS VULVÆ AND ANI.**—DR. ATTHILL, of Dublin, treats this troublesome complaint with carbolic acid. The formula which he recommends is the following:

Acid carbol., . . . . .	20 gr.
Tr. opii, . . . . .	℥ss.
Acid hydrocyan. dil., . . . . .	℥ij.
Glycerinæ, . . . . .	℥ss.
Aq., . . . . .	q. s. ad ℥iv.

A tampon of lint soaked in this solution is introduced into the rectum and renewed after each stool.—*L'Union Méd. de Canada*, Jan. 1885.

**INFECTIOUS PNEUMONIA.**—M. GERMAIN SEE, in a paper lately presented to the French Academy of Sciences, after reviewing the experiments of Friedlander and Talmon, in which micrococci, from pneumonic exudations, produced pneumonia in the lungs of rabbits and mice, in nowise different from the disease as manifested in man, avows his belief that pneumonia is a specific parasitic disease. A *résumé* of the paper touches the following points: Pneumonia may be reproduced in animals, but reproduction is impossible with ordinary agents, either physical or chemical. In order that the characteristic inflammation may be developed, it is necessary that a special microphyte be brought into contact with the pulmonary tissue, and be there developed. The inflammation remains local if it does not exceed the limits of the pulmonary apparatus; this is simple pneumonia. The disease extends and becomes general when the microbe reaches the circulation, either through the lymphatics or by the blood.

*Distinction between such cases of pneumonia and broncho-pneumonia.* Parasitic pneumonia (pneumonia by infection) should be absolutely distinguishable from other forms of acute pulmonary inflammation which are described under the name of broncho-pneumonias. In these latter microbes also exist, but the part they play is but secondary. The progress of the disease, as well as its extent, is here dependent upon a preceding bronchitis, having its origin in cold, and upon the extension of such inflammation to the bronchioles and alveoli. Broncho-pneumonia caused by cold is rarely

seen elsewhere than in children and the aged, and is very rare in the adult, who is much more the subject of parasitic pneumonia.

In parasitic pneumonia the mode of development is similar to that of the eruptive fevers. As in variola-measles, its duration is limited, and does not ordinarily exceed six or nine days.

Considered from this point of view, he admits but three indications for treatment:

1. To combat the fever by the aid of sulphate of quinine.
2. To sustain the forces of the patient by means of alcohol.
3. To combat inanition by means of nutritious beverages.—*Revue de Thérapeutique*, Jan. 1, 1885.

**HIPPURATE OF LIME AS A FOOD.**—DR. POULET, in the *Journal de Médecine de Paris*, recommends, in numerous affections, the hippurate of lime, prepared as follows:

Hippuric acid, . . . . .	3 ounces.
Milk of lime, filtered, . . . . .	2 quarts.
Warm water, . . . . .	2 "
Sugar, . . . . .	5 pounds.
Alcoholic extract of citron, . . . . .	¼ ounce.

The hippuric acid and the milk of lime are mixed by degrees in a portion of the warm water, and tested from time to time until all acidity has disappeared, which requires at least four hours. The remainder of the water and the sugar are then added and boiled till a suitable consistency is obtained. The dose is a tablespoonful two or three times a day. The preparation must be shaken before administration. According to Dr. Poulet, the hippurate of lime as above obtained is specially useful in: 1. Affections of the urinary passages; 2. In diseases of the liver; 3. In certain diseases of the skin dependent on hepatic lymphatic derangement; 4. In numerous diseases of the digestive tract.

**THE COLA BERRY.**—M. BEAUMETZ presented recently to the Société de Thérapeutique specimens of the cola berry, and of the different pharmaceutical preparations of which it forms the basis. The cola berry is the product of the *Steroulia acuminata*, a plant originally from Africa; it is considered by the natives to be a tonic and an aphrodisiac. It contains a great proportion of caffeine, and small quantities of theobromine and tannin. It is employed in the Soudan in two forms: as a masticatory or as an infusion, after being roasted and pulverized. M. Dujardin-Beaumetz has experimented with it in chronic diarrhoea, and has obtained excellent results, analogous to those which the physicians of the navy have obtained from cochinchine. In cardiac diseases, at periods of asystole, the preparations of cola appear to act as coffee and caffeine, at once as a heart tonic and as a diuretic; and finally the general stimulant and tonic effects of the drug may be used advantageously in a great variety of adynamic conditions.

M. Dujardin-Beaumetz used the infusion of the roasted cola berry in doses of about four drachms to a cup of water; of the elixir, or tincture of the cola, in doses of a dessert or tablespoonful. There are also prepared a wine and an alcoholic extract of the cola.—*Journal de Méd. de Paris*, Jan. 3, 1885.



# THE MEDICAL NEWS.

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SATURDAY, JANUARY 31, 1885.

## IS COMPLETE LARYNGECTOMY A JUSTIFIABLE OPERATION ?

DURING the past year, in addition to scattered reports of individual cases, several important statistical contributions were made to the subject of complete excision of the larynx, of which the most notable are those of ZESAS, published in the *Archiv für Klinische Chirurgie*, Bd. xxx, Heft 3, and of SOLIS COHEN, in his excellent article on "Injuries and Diseases of the Air-passages," contained in the fifth volume of the *International Encyclopedia of Surgery*. From these and other sources of information, we find that the entire larynx has been removed at least 88 times, a number which is, perhaps, sufficient for the settlement of the vexed questions of the justifiability of the operation and its proper position as a surgical procedure.

The bare results of the 88 cases show that 52 recovered, and 36, or 40.90 per cent., died. Of the 52 recoveries 20 died subsequently of recurrence of the disease for which the operation was resorted to, 12 perished from other affections or accidents, 2 were living with recurrence, and 18 were alive and well for periods which varied from a few weeks to ten years.

If the propriety and advisability of complete laryngectomy were based upon the above record, it would certainly be excluded from the category of established operations by not a few surgeons. Hence, in conducting an inquiry of this kind, impartial justice can only be secured by dividing the cases into three distinct groups, in accordance with the causes for which the procedure was instituted. For this reason we will discuss the operation as performed, first, for

carcinoma, secondly, for sarcoma, and thirdly, for other affections.

1. The cases of carcinoma number 76. Of these 43 recovered, and 33, or 43.42 per cent., perished, the cause of death having been pneumonia in 19, bronchitis in 1, pulmonary emphysema in 1, collapse in 5, exhaustion in 3, hemorrhage in 1, the passage of a feeding-tube into the mediastinum in 1, and not ascertained in 2. Of the 43 recoveries, 18 died subsequently from recurrence of the disease, at periods varying from two to thirty months, or at eight months on an average; 8 perished subsequently from other causes or accidents, at periods varying from three to twenty-four months, or at eight months and a half on an average; 2 were living with recurrence respectively at the expiration of twelve and sixteen months; and 15 were alive and well at the dates of the last reports. Of the 15 still living, without recurrence, seven weeks had elapsed since the operation in 1, three months in 2, four months in 1, six months in 1, seven months in 1, sixteen months in 1, twenty months in 1, twenty-one months in 1, twenty-six months in 1, twenty-seven months in 1, three years and four months in 1, and three years and seven months in 1, the date being uncertain in 2. The average life of these cases was sixteen months and two-thirds, while that of all cases, living or dead, after the operation, was six months and a half.

From the foregoing facts, it appears that the immediate mortality of the operation is 43.4 per cent., that the disease recurs in 46.5 per cent. of the recoveries, and that of the living and well cases, the mean duration of life is less than seventeen months. The high mortality of the procedure, especially from lung complications, the large rate of recurrences when life is spared, and the failure in all cases, save two, to bridge over three years—the generally accepted criterion of success in operating for carcinoma in other organs—all go to show that, with our limited experience up to the present time, total laryngectomy for carcinoma is not justifiable, and that the views of Cohen, expressed in a paper published in the *Transactions of the College of Physicians of Philadelphia*, for 1883, namely, that the operation does not tend to the prolongation of life, and that palliative tracheotomy secures the greatest good to the greatest number of those suffering from this disease, are correct.

Although, in the light of our present knowledge, the operation is not advisable, it does not follow that better results will not be obtained in the future. Many of the cases occurred in aged and exhausted subjects, and more were totally unfitted for the operation through the extrinsic seat of the disease and through its extension to the associated lymphatic glands, the tongue, the pharynx, the œsophagus, and the thyroid body.

In his admirable brochure on Malignant Disease of the Larynx, Mr. Butlin echoes the views of those who have studied the life-history of carcinoma when he says, "I think that the experiment has not yet been conducted with sufficient care. The cases have not been selected with special reference to the origin and probable course of the disease. Until this has been done, and the precaution recommended by Landerer has been adopted, I am not prepared to abandon the operation as hopeless. I would, therefore, suggest that in the immediate future, extirpation of the larynx for carcinoma should be practised only for intrinsic carcinoma which is still limited to the larynx, and that tracheotomy should be performed at least a fortnight or three weeks before the extirpation, in order to give the patient a good opportunity of gaining strength to bear the larger operation."

Mr. Butlin has shown that intrinsic carcinoma is much more frequent than extrinsic carcinoma, which is limited to the structures above the false vocal cords, and that it is far less liable to produce lymphatic disease, and to extend beyond the larynx. Hence, intrinsic carcinoma is particularly well fitted for the operation, and that it does influence the result is clearly shown by an analysis of the cases in which the origin of the disease could be traced. Thus, we find that of the fifteen still living without recurrence, the average duration of life is nineteen months and a half for intrinsic carcinoma, as against eleven months and a half for extrinsic carcinoma, and that of those which died of recurrence, the average life was nine months and two-fifths for intrinsic disease, as against six months and one-seventh for extrinsic disease.

As the natural outcome of these considerations, we think that we are fully justified in recommending total excision for intrinsic carcinoma of the whole larynx, after a preliminary tracheotomy, in subjects not too far advanced in years. Under these circumstances, and with the exercise of great care to prevent lung complications, there is no reason why the future mortality should not be greatly reduced, and the number of permanent cures be materially increased. When, however, the disease is unilateral there would seem to be no necessity of removing the entire larynx, as extirpation of one-half of the organ has afforded far better results. Thus, of 7 unilateral laryngectomies, in which the results are known, 2, or 28.57 per cent., died, the disease recurred in six months in 1, and 4 were living and well for periods varying from nine months to three years and a half, or for twenty-one months on an average. Hence, we agree with Hahn, Schede, and Kuester, whose views are expressed in the *Beilage zum Centralblatt für Chirurgie*, No. 23, 1884, in advising the lesser operation for unilateral disease, for the reasons that

it is attended with a greatly reduced mortality, and followed by fewer recurrences and a larger number of permanent successes.

2. The entire larynx has been extirpated for sarcoma 6 times, with 5 recoveries and 1 death, the latter having been due to hemorrhage on the fifth day. Of the survivors, Bottini's and Caselli's patients were living and well at the expiration, respectively, of ten and four years; that of Foulis died of phthisis at the end of seventeen months and a half, without recurrence of the disease; Lange's patient perished in seven months from asthenia, with a small recurrent nodule; while the case of Czerny was marked by recurrence in four months, and death eleven months later.

When it is remembered that the patient of Lange was seventy-four years of age, the mortality, which reached only 16.66 per cent., must be regarded as being remarkably slight. In only two cases, or in 40 per cent., was there recurrence, while two other patients were restored to usefulness. These results are brilliant when compared with total laryngectomy for carcinoma, and they are as favorable as are the results of operations for sarcoma in other organs or tissues of the body. The operations of Bottini and Foulis were for intrinsic disease. Of unilateral extirpation of the larynx for sarcoma little can be said, as the only cases thus far recorded are one by Gerster, which recovered, but died of pleurisy, without recurrence, one year subsequently; and one by Kuester, which also recovered, but in which there is no further history.

3. Total laryngectomy for other affections than infiltrating tumors has been resorted to in 6 cases. The operation was done in 1 for syphilitic stenosis, with death from pneumonia in three weeks; in 1 for necrosis and perichondritis, with death from exhaustion on the fifth day; in 1 for tubercle, which recovered, but perished from general phthisis in two months; in 1 for lupus, which recovered, but died of phthisis at the expiration of three years; and in 2 for papilloma, of which one was living two years subsequently, and one recovered, and died of phthisis in five months and a half. Hence, this group of cases indicates a mortality of 33.33 per cent.

From the data contained in the foregoing paragraphs, we believe that we are warranted in concluding that complete laryngectomy is indicated for sarcoma; that it is justifiable in carcinoma when the disease is intrinsic, or has not invaded the surrounding tissues and glands, and when the patients are not too far advanced in years; and that it may be resorted to for other conditions, such as intractable thickening and stenosis, and papilloma which shows a disposition to recur and extend after the employment of less harsh operative procedures.

### THE OBSTETRIC PELVIS AND ITS AXES.

THE inclined planes of the pelvic cavity were, under the influence of Baudelocque's teaching, and that of his disciples, so firmly established in the professional mind, as explaining certain movements of the head of the foetus in labor, that almost every one believed them essential for understanding the mechanism of labor. But even in the country of Baudelocque, these planes are almost forgotten; and few, if any, obstetric teachers now refer to them unless in memory of an effete theory. That great teacher, the late Prof. Hodge, held faithfully to these inclined planes, only deviating from the teaching of the great French master by placing the arbitrary division between anterior and posterior planes somewhat further back. But even this change has not saved the inclined planes.

At one time, in studying the axis of the pelvis, all authorities were agreed upon the curve of Carus as being that axis; this curve was as settled a line in arbitrary obstetric anatomy as Mason and Dixon's line was in the political history of our country—each was an assumed finality. The progress of events has taken away all significance from the latter line, while a supposed more accurate study of the pelvis has led to the abandonment of the Carian curve. In place of this curve we were given by obstetricians, who still held to a mere obstetric study of bones, the curve of the parabola; that was declared to be the axis of the true pelvis. One retains such pleasant memories associated with his study of the parabola, in college days, that it was delightful to find that this curve was a part of obstetric study; then, too, the movements of the foetus through the birth canal seemed so clear when the student was taught that this canal had a parabolic form. Metabolism in physiology, parabolism in obstetrics!

But, alas! the parabola is threatened; it is probably doomed to follow the curve of Carus and the inclined planes to the tomb of the Capulets. DR. ALPHONSE BOISSARD has recently published a very interesting monograph, *De la Forme de L'Excavation Pelvienne considérée au point de vue obstétrical*, in which he states that different obstetric writers have until recent years been more preoccupied in giving an exact description of either a dry pelvis under their eyes, or of a pelvis ideally conceived in their mind, than in representing the pelvis as it actually is, comprising not only bones, but soft parts. He holds that as to the pelvis in its fresh state, the coccyx really occupies the fundus of the cavity, and the line measuring the depth of this cavity is the central line or axis, which thus obviously is a straight line. This is the line in which the foetus descends, and then presses upon the part of the basin formed at the expense of the pelvic floor. According to him, the

pelvis does not in any respect present the aspect of a curved canal, but rather of a cavity largely cylindrical, presenting two walls, anterior and posterior, almost vertical, and a fundus forming a plane nearly perpendicular to these walls. He states that Fabbri has proved this configuration of the pelvis by pouring into the entire pelvis—that is, the bony pelvis along with the membranous canal formed by the soft parts—liquid plaster, and the cast thus formed shows the shape of the entire pelvis.

As the opening by which the foetus is to escape is upon the plane of the anterior wall, it must, after descending to the bottom of the excavation in a straight line, entirely change its direction in order to pass through the membranous canal: the axis of this canal is at a right angle with the axis of descent. We have thus as representing the axis of the birth canal not a curved line, but two straight lines, the one nearly perpendicular to the other.

The views of Dr. Boissard are more than interesting—they will prove useful, and if accepted, as we believe they will be finally, will make it easier to understand the mechanism of labor, and they will also prove of use in practical obstetrics.

### THE SEMIRAMIDIAN OPERATION.

THE association of the name of the inventor of a new instrument, or the modifier of an old one, or the originator of an important operation, is quite just. How grandly a man grows in professional estimation if he has invented a speculum, or a pessary, or modified surgical or obstetric forceps! Modest as he may be by nature, how is his vanity fed by the catalogues of instrument makers and the display in their windows and cases!

But still greater is the fame of those who first advise or do important operations. These operations are generally known by their names, and, even when their diffidence may prevent themselves laying claim to such honor, the love of hero-worship, which, according to Carlyle, is so strong in the human heart, and the sense of justice, which is so decided in the medical mind, make others eager to do honor and justice to these inventors, and they are ready to declare, in the face of the whole world, "We will call it Brown's, or Black's, Green's, or White's operation," as the case may be.

Confident in this admiration on the part of the medical mind for whatever is honest and just, we wish to rescue from oblivion in this regard the name of the one who was first to extirpate the human testicles. In thus doing, we are glad, too, it will be shown that, ages before our distinguished countryman, Dr. Battey, performed the operation which he called normal ovariectomy, but to which a just and grateful professional world gave with one voice given



his name, one of the most famous queens of antiquity performed normal orchidectomy.

The removal of the testicles—the *little witnesses* not having which a man could not testify in a Roman court—has been done for various reasons. Thus, for awhile charlatans in France, travelling through the country, extirpated these organs to prevent hernia; and it was not until 1776 that this practice was stopped by law. The testicles have been removed in order to secure sopranos for the church and keepers for seraglios, and in Egypt such removal was the punishment for rape. Some celebrated characters in church or State have removed their own testicles in order to save themselves from temptation or from slander. Apart, too, from orchidectomy for disease of the organs, the operation has been done with the hope of curing epilepsy, and who knows but in the future it may have as ample a field in the cure of this and some other neuroses as is now assigned to removal of the ovaries! So much the more reason that she who originated the operation should be properly honored for not only showing what a woman could do, but also for demonstrating the safety of the doing.

Unfortunately, we have no authority earlier than one of the Latin poets to quote in favor of the operation being first done by Semiramis, for it is to this illustrious queen the honor belongs. Nevertheless, the statement made by this poet is unequivocal:

*Semiramis teneros mares castravit omnium prima.*

Those thus castrated were made overseers and guardians, the operation rendering them more tractable and obedient.

As Semiramis lived in the thirteenth century before the Christian era, an earlier claimant for priority in this operation is not likely to be found, and, therefore, we think it ought to receive her name, and be known to the latest ages as the Semiramidian operation.

A serious objection to the operation, unless when done on account of grave disease, is that, from a physiological standpoint, a man's testicles are not his own—they were made not for him, but for posterity. Nevertheless, moral considerations, the improvement of society, and the development of the race may possibly sometimes conflict with such physiological law.

#### THE SPREAD OF PROPHYLAXIS AGAINST TUBERCULOSIS.

NOTWITHSTANDING the fact that the new doctrine as to the bacillary origin of tuberculosis met with more direct opposition in Austria than in any other country on the continent of Europe, the Austrian Government now recognizes its infectious nature, and has directed its hospital authorities to isolate

completely all patients suffering from phthisis, and to take into consideration the employment of such other prophylactic measures in harmony with this view as may be necessary to prevent the extension of the disease.

Abundant opportunity for testing the value of such precautionary measures likewise exists in the large municipal hospitals of this country, such as the Charity Hospital in New York, and the Philadelphia Hospital in this city, in which fully one-half of the cases treated are of phthisis, and we commend a trial of them to the physicians of these institutions.

In this connection we may say we have reached a stage in which it would seem right that hospital authorities generally should insist that their surgeons adopt antiseptic principles in their hospital practice.

### REVIEWS.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By FRANK HASTINGS HAMILTON, M.D., LL.D. Seventh American Edition. 8vo. pp. xxxi., 1005. Philadelphia: Henry C. Lea's Son & Co., 1884.

To praise a work which has reached a seventh edition is superfluous. It stands by itself, and has a character which cannot be much affected by any words of a reviewer. Some books, of course, have a more or less successful career for which it is impossible to account upon any discernible literary principles; but when the work is a professional one, appealing to the practical wants of busy men, its longevity is traceable to its excellence. Dr. Hamilton's book took upon its first appearance, and has since maintained, a very high position as a classical and authoritative monograph. In its successive editions care has been exercised to keep it abreast of a rapidly progressive science, and in this latest issue there is manifested much painstaking and conscientious effort to include within its covers all recent and valuable additions made to the subject of which it treats.

When medical journals teem with figures and descriptions of apparatus devised by different surgeons to meet their individual opinions, or to suit particular cases, it is not to be expected that all will find place in any single volume, however comprehensive its scope. Nor is it desirable that a work so generally referred to as that of Prof. Hamilton's should be so encumbered. It is enough that the underlying principles of treatment should be clearly enunciated, and a limited number of the infinitely varied forms of dressing given. Certainly no one can complain that the book is wanting in either of these respects, and the tyro in our art will often be bewildered when he turns over its pages in the attempt to decide what form of apparatus he will adopt in any given case as he familiarizes himself with the many varieties detailed by Dr. Hamilton. But if he will carefully consider the anatomical principles laid down by the author of the volume, and accept his judgment concerning the merits of the various dressings, he will not greatly err. In the matter of expressing his own opinions, however, we think Dr. Hamilton too often

ers on the side of modesty. Modesty is a very good thing, as is the case with most scarce articles, but many students would be glad to have opinions of a more ex-cathedra tone from one whose experience and learning well entitle him to pronounce such utterances. We well remember the oft-repeated expression of a distinguished professor in the University of Pennsylvania, who, when treated by some learned student to various theories and plans of treatment, would reply, "But what do I teach, sir?" and the definite teachings of that I impressed themselves upon his pupils, supplying a sound and firm basis to which they may have added much since, but from which they are not readily moved. Dr. Hamilton's principles are sound, and his opinions are entitled to more than respectful consideration, while the very thorough way in which he has noticed the accumulated observations and experience of other surgeons, shows that he is far removed from anything like unreasonable self-sufficiency.

The references to recent works are very numerous, while no less than three hundred and seventy-five woodcuts are interspersed through the pages of the volume. As we have said, commendations of the work are not needed. All young surgeons should secure it as an indispensable book of reference, while older ones will regret that there is no way yet devised by which they can exchange their older and time-honored copies for the new edition.

## SOCIETY PROCEEDINGS.

### NEW YORK SURGICAL SOCIETY.

*Stated Meeting, January 13, 1885.*

THOMAS M. MARKOE, M.D., IN THE CHAIR.

DR. CHARLES K. BRIDGON read a paper entitled

SURGICAL OBSERVATIONS IN THE TREATMENT OF THE DISEASES AND ACCIDENTS OF THE LIVER.

(See page 115.)

DR. A. C. POST said that he once had a patient at the New York Hospital who was under treatment for lupus, to which he applied Dupuytren's powder, consisting of one part of arsenious acid and one hundred parts of calomel. After this powder had been applied for some time, the patient was taken with high fever, vomiting, epigastric pain, and jaundice, and he thought that perhaps it was a case of poisoning by arsenic. At all events, the result was fatal; but at the autopsy, Dr. Post was relieved with regard to his suspicion concerning arsenical poisoning by finding that death had been caused by a very large gall-stone obstructing the common duct.

A number of years afterwards Dr. Post was called to visit Prof. Granville Sharp Patterson, whose condition was so much like that of the patient whose history he had just related that he diagnosed obstruction from a gall-stone, and it proved to be so.

DR. PETERS said that he made the post-mortem examination in the first case reported by Dr. Post.

DR. POST further remarked that there was intense jaundice in both cases, extreme irritability of the stomach, and obstinate vomiting, but death did not occur from coma, as with bile-poisoning.

He had at one time under his care a gentleman who was attacked with febrile symptoms, accompanied by acute pain in the right hypochondrium. At first he suspected pleurisy, but there was no evidence of this affection on physical examination. The patient continued to suffer from the localized pain, but gradually improved, so that he was able to get to Long Island, and Dr. Post lost sight of him temporarily. The acute febrile symptoms had in a measure subsided. During the patient's absence in the country there was a sudden aggravation of the symptoms, and a neighboring physician was called in, who found the man suffering from pneumonia, and he was also very much disposed to question Dr. Post's diagnosis with regard to the early history of the case. The attack of pneumonia was a severe one, and was complicated with copious expectoration of dark chocolate-colored fluid. Dr. Post saw the patient subsequently, and found a collection of fluid in the chest, and drew off a considerable quantity of very viscid, chocolate-colored pus. A short time before the patient's death, there was a copious discharge from the bowels of the same material. It was evident that the case was one of hepatic abscess, which had opened into the cavity of the pleura, and had also communicated with the bronchial tubes, and afterwards had probably opened into the colon.

DR. GEORGE A. PETERS referred to a case under his observation some years ago, in which the patient had an attack of trouble apparently in the liver, and finally there was expectorated the contents of a large hepatic abscess, which had opened into a bronchial tube. The patient made a complete recovery. Broken-down liver tissue was found in the material discharged from the first. Subsequently the patient expectorated bile and pus for several weeks, but ultimately recovered, lived for several years, and died of another disease, the original abscess having healed.

DR. POST saw a lady many years ago who was subject to attacks of acute pain in the epigastric region and right hypochondrium, attended with jaundice lasting for a few days, and which were relieved by the use of opiates and other remedies. These attacks appeared at irregular intervals. On one occasion the patient was seen by the late Richard K. Hoffman, who bled her freely with immediate relief, and she never had a return of these attacks, although she had previously suffered from them repeatedly.

DR. MARKOE said that Dr. Post's case reminded him of one in which the patient, about twenty years before his death, had suffered from what seemed to be inflammation of the liver, and for many days his life was despaired of. The late Dr. Francis saw the patient with him in consultation, and finally suggested that it would be well to bleed, to which suggestion Dr. Markoe acceded, and Dr. Francis bled the patient largely, which gave great relief. Nevertheless the symptoms progressed, and again the patient seemed to be *in extremis* from dyspnoea, and there was a great prominence of the entire hypochondriac region, which was exceedingly tense, but there was no fluctuation. After about two weeks, expectoration of an immense quantity of pus took place, and coincident with this all the symptoms abated. The diagnosis of hepatic abscess seemed to be confirmed by this fact, and that the abscess had discharged through the bronchial tubes. Dr. Markoe's impression at first was

that it was a post-hepatic abscess which had found its way through the lung. After several months the patient recovered substantially, although the expectoration would nearly cease and then return somewhat, and after nearly a year he at times expectorated bile, and subsequently for several years the patient expectorated bile at intervals, which indicated that it was originally an abscess of the liver that had opened into the bronchial tubes, and that a fistula remained. The pus first expectorated was of ordinary color.

DR. MARKOE asked for the experience of the members with reference to the appearance of gall-stones in the passages from the bowels after symptoms of obstruction had existed and suddenly disappeared.

DR. BRIDDON said that he had often searched for gall-stones under these circumstances, but had never been able to find them.

DR. MARKOE said that he asked the question because he saw, many years ago, a lady, sixty years of age, who had been subject to attacks which had been diagnosed as of this character, and undoubtedly the diagnosis was correct. These attacks were very severe, indeed, and extended over a history of several years. After one of the most severe attacks, she passed a gall-stone, as large as the last joint of his thumb, and from that time the symptoms ceased, and she never had another attack.

DR. KEYES referred to a case, that of a young woman living out of town, whom he had attended during a few weeks while she was in the midst of a number of attacks of the most intense jaundice. The fresh onsets of jaundice repeated themselves for two or three years, and on one of these occasions she was covered with erythematous pustules due to scratching, suffered from vomiting, emaciated very much, and her distress was so continuous that she lived chiefly upon morphine and chloroform. The patient said to him that gall-stones had been found in the discharges from the bowels on several occasions. About one month ago Dr. Keyes saw the patient, while again accidentally in the city, when she told him that she was finally cured by taking large doses of phosphate of soda for a number of months. The mother, and also the grandmother of the patient, had suffered from similar attacks.

DR. BRIDDON could bear testimony concerning the efficacy of phosphate of soda in this class of cases, as he had employed it with apparent success in the treatment of three patients. In one the attacks were markedly severe, and the patient had taken morphine, large quantities of olive oil, and many other remedies. He put her upon the use of one drachm of the phosphate of soda three or four times a day, first recommended, as he recollected, by Dr. Bartholow, and she continued these doses for a long time, and has been free from the attacks ever since.

DR. L. M. YALE remarked that the use of phosphate of soda in hepatic troubles was much older than Dr. Bartholow, and that Dr. Stephenson, of Edinburgh, had, a number of years ago, urged it especially for children, under the conditions in which the gray powder had usually been employed. With regard to the use of olive oil, he thought that it had been determined that the supposed discharge of gall-stones after its use was really due to a sort of saponification of the excess of oil, the masses being usually fatty.

DR. POST was once called to see a lady who was suffering from symptoms of obstruction of the bowels, and on examination he found a solid mass occupying the rectum, which, when scooped out, was found to contain hundreds of pills embedded in hard fecal matter, the whole mass resembling the mineral known as pudding stone.

DR. GEORGE A. PETERS referred to the case of a young lady who took a great number of cathartic pills without any effect, and it was conjectured by some that she did not take them because of the immense number which she said she had swallowed without any result. It was subsequently discovered that she sewed up each pill in a piece of tamarind skin, and she also had an accumulation of undissolved pills.

DR. POST inquired whether, when gall-stones had reached a size sufficient to produce symptoms of obstruction, they passed through the duct directly, or ulcerated their way into the bowel?

DR. MARKOE referred to a specimen in the New York Hospital Museum, in which a large gall-stone had passed partly through the duct, and had there become impacted and remained, seeming to illustrate the possibility of gall-stones of considerable size passing through the duct.

DR. H. B. SANDS believed that when the gall-stone was a very large one, such as would be likely to occasion intestinal obstruction, it never passed through the duct, but always into the duodenum by ulceration, the intestine having become previously adherent. In answer to one of the questions as to gall-stones being seen in the discharges from the bowel, he recalled a case which he saw in consultation with Dr. Chamberlain, in which a lady had been very ill, was jaundiced, and had passed quite a number of gall-stones, probably from six to twelve, and the pain and other symptoms had subsided. What impressed them most was the consistency of these gall-stones, which were faceted, of the diameter of about a fourth of an inch, but were almost as soft as putty. It seemed singular that they should have preserved their shape while passing through the bile-duct.

The late Dr. Parker passed a gall-stone of unusual size, having a diameter of about half an inch. He was very ill before it escaped into the intestine; had great pain, accompanied with jaundice and chills, but his severe symptoms subsided immediately after the passage of the stone; and, so far as Dr. Sands was aware, the patient did not pass any more, nor have any further trouble subsequently from this cause. When his body was examined after death, it was discovered that the gall-bladder was obliterated; there was no cavity, although the site of the bladder could be distinctly seen. The hepatic duct was present, but there was no cystic duct. It seemed probable that, at the time the large gall-stone passed, an ulceration was set up which resulted in the obliteration of the gall-bladder and the cystic duct.

#### PENDULOUS CELLULO-FIBROUS TUMOR.

DR. C. K. BRIDDON presented a specimen which was interesting chiefly on account of its rarity and size. It was removed from the inner aspect of the thigh, at about its middle, of a woman thirty-five years of age; and had been nineteen years in developing. The entire growth was eight and one-half inches in length, of which four



and one-half inches belonged to the tumor, the rest being the pedicle; the circumference of the tumor was eight inches.

# CHICAGO GYNECOLOGICAL SOCIETY.

*Stated Meeting, January 16, 1885.*

THE PRESIDENT, H. P. MERRIMAN, M.D.,  
IN THE CHAIR.

DR. E. C. DUDLEY read a paper on an interesting and unusual case of

## DOUBLE OVARIOTOMY.

The patient, 18 years old, unmarried, came to Mercy Hospital, about eighteen months ago, to consult Dr. Dudley about marked abdominal enlargement. The diagnosis of monocystic tumor of the parovarium or broad ligament was made. The cyst was aspirated, and two gallons of fluid were removed. This fluid possessed the following characters: sp. gr. 1.005; neutral reaction; limpid as water; odorless; colorless; on microscopical examination no morphological constituents were detected; on chemical examination certain mineral salts were found, but no albumen. The patient experienced so much relief, after aspiration, that she left the hospital with the impression she was permanently restored to health. About three months ago, she visited Dr. Dudley at his office. It was found the cyst was partially refilled. An operation was determined upon.

The preparatory treatment of the patient—apart from tonics, the most nutritious of foods, frequent baths, and finally a Turkish bath, immediately preceding the day of operation—consisted in the exhibition of remedies designed to increase the tonicity of the muscular coats of the intestines, and to expel all the gases. For this purpose the patient was given, two or three times daily, a mixture of columba, rhubarb, and compound tincture of cardamom. In a case, operated upon early in the autumn, Dr. Dudley had experienced much difficulty in the management of the intestines, which were distended with gas. In this case, subjected to the preparatory treatment just detailed, absolutely no difficulty in that direction was encountered. The *mons veneris* was shaved, and the vagina irrigated, immediately before operation. The details of rigidly antiseptic surgery were observed with reference to the operating room, instruments, operator, and assistants.

October 29.—Dr. Dudley, assisted by Dr. W. W. Jagard, Dr. R. W. Bishop, and Dr. W. E. Casselberry, performed ovariectomy, and removed both ovaries and tubes, together with a large monocyst of the left broad ligament. The pedicle of the large cyst was very vascular, and after transfixion with the passage of the ligature around each half, the operator was compelled to ligature *en masse* below the point of transfixion. The pedicle was afterwards seared above the Baker Brown clamp with Paquelin's thermo-cautery. Ether was employed as the anæsthetic. The patient reacted well. At noon, two hours after operation, temperature 100.7°; pulse 150; respiration 20. She complained of nausea. At night, temperature 100.8°; pulse 115; respiration 20. Nausea continues; no tympanites.

30th.—Morning temperature 100.4°; pulse 112; respiration 20. Evening temperature 101°; pulse 124; respiration 20. Throughout the day the patient moaned

and tossed, complained of nausea, vomited incessantly; a peculiar talkative delirium ensued. Morphia and atropine were given to suppress vomiting; discontinued the atropine, fearing its cerebral action. Hot water, as suggested by Mr. Keith, was tried, with hope of checking nausea and vomiting, without success. The deodorized tincture of opium was substituted for morphia. The talkative delirium, nausea, and vomiting, continued unabated. The patient retained only a little ice-water at long intervals.

31st.—Morning temperature 99.8°; pulse 110; respiration 20. Evening temperature 99.8°; pulse 110; respiration 20. Nervous symptoms greatly exaggerated; nausea and vomiting unabated; pain in the abdomen complained of at intervals. Codeia was substituted for the other opiates. Small quantities of milk and lime-water, at intervals, were exhibited. The patient remained in the same condition. Talkative delirium, no sleep, nausea and vomiting, pain in the abdomen at intervals, no tympanites.

Nov. 1.—Morning and evening temperature 99.7°; pulse 106; respiration 20. Talkative delirium, nausea, vomiting of bile—the "mouth-filling" of Mr. Keith—abdominal pain, no tympanites. She commenced to menstruate, or, at least, blood began to escape from the vagina.

2d.—Morning temperature 98.8°; pulse 114; respiration 18. Evening temperature 98.6°; pulse 135; respiration 21. Nervous symptoms more distressing; nausea and vomiting continuing; patient becoming emaciated; face taking on a pinched, anxious expression. Valentine's beef-juice exhibited; mustard to epigastrium; strychnia in small doses; champagne 3iss.

3d.—Morning, 8 A. M., temp. 101°; pulse 130. 10 A. M. temp. 101.2°; pulse 160. 10.30 A. M., temp. 101.6°; pulse 178. Persistence of wild, talkative delirium, nausea, vomiting, abdominal pain. The pulse, while very rapid, was not the feeble pulse of collapse. In a consultation with Dr. W. H. Byford on the previous day, it was decided that the patient was dying of exhaustion. Dr. Byford was averse to reopening the abdominal incision. Dr. Dudley had one case of peritonitis, following perforation of the posterior uterine wall, in Mercy Hospital, that died of septic poisoning, although the temperature did not rise above 100°.

With the aid of Dr. R. W. Bishop, Dr. Dudley etherized the patient, removed four or five stitches from the lower end of the abdominal incision, and inspected the cavity of the abdomen. The peritoneum was injected; no lymph was noticed; no gas in the intestines. The pedicles were not covered with lymph. A disinfected sponge, on a holder, was passed into the cul-de-sac of Douglas; about one-half of a fluidounce of bloody serum was removed. This red-stained fluid was odorless; it was not further examined. Feeling no good had been accomplished, the incision was reunited. This operation was performed at 10.30 A. M.

Temp. at 12 M., 101°; pulse, 150.

" 2 P. M., 100°; " 144.

" 3 " 100°; " 135.

" 7 " 100°; " 140.

Jactitation, wild delirium, nausea, and vomiting; pain in the region of the cardiac axis; no tympanites. Rectal alimentation.

4th.—Morning temp. 100°; pulse 135-150. Whiskey, beef-tea and milk at regular intervals; bisulphate of quinia per rectum. Persistence of the symptoms before detailed.

In the afternoon the tongue was dry, cracked, ready to bleed; decidedly less nausea and vomiting. The nurse was directed to give the patient an enema of soap and water, with extract of ox-gall. One quart of this mixture was injected into the bowel. No evacuation of the contents of the rectum following, a tube was introduced, which was followed by that classical sign, the audible passage of flatus. Mr. Keith says that if the intestines have sufficient muscular energy to expel flatus, the prognosis becomes more favorable. It is probable a reversed peristalsis occurred, and the injection was entirely absorbed. One hour afterwards the tongue became moist. Evening temp. 101°; pulse 135. Acting on the suggestion from the enema, one quart of strong beef-tea was introduced into the bowel.

5th.—Patient evidently in better condition. Temp., morning and evening, 98-99°; pulse 120-130. One quart of strong beef-juice was exhibited per rectum, and carried well up into the bowel. About three-fourths of this quantity was retained. Slight nausea and vomiting; bowels were moved spontaneously, with evacuation of a large quantity of dark, tarry, fetid feces. The sutures originally inserted, were removed.

6th.—Morning temp. 98.5°; pulse 90. Evening temp. 98.1°; pulse 115. Bowels were again moved spontaneously, with evacuation of dark, tarry, fetid feces, all the symptoms of the patient assuming a favorable character. Beef-tea, whiskey, quinine, and nutrient enemata continued. From this time on, the patient made an uninterrupted recovery. At the end of two weeks she was removed to St. Luke's Hospital. She is now in good health, and pursuing her usual avocation. In conclusion, Dr. Dudley called attention to the three following subjects, and requested that the discussion should be more particularly limited to their consideration.

I. Preparatory treatment of the intestinal tract. Is it possible to render the intestines manageable during an operation in the abdominal cavity, by any dietetic or medical agencies? The escape of the intestines without the abdominal parietes was a very distressing complication. The shock of the operation was increased; large vascular areas were rapidly cooled, notwithstanding the fact that they might be enveloped in warm, disinfected fabrics. It was not always easy to return the intestines to the cavity of the abdomen, and even then there was danger of strangulation. He was of the opinion that, in the case reported, the rhubarb, calumba, and cardamon were active in restoring tonicity to the muscular coats, and in the expulsion of flatus.

II. The retention of enemata. It was a matter of surprise to him that one quart of fluid, exhibited per rectum, on three successive days, should be retained. He supposed that the liquid portions of the injections were absorbed at once, in consequence of the state of the tissues, resulting from exhaustion. The return of the tongue to a moist condition, within a very short space of time, immediately following the injection, was evidence in favor of this explanation.

III. The reopening of the abdominal incision. Had it done any good? What produced the excessive ner-

vousness? What was the cause of the nausea and vomiting?

The problem was an intricate one. It had been asserted that a very tight ligature around the pedicle can act as a reflex irritant. The sutures in the abdominal incision are sufficient, at times, to produce various obscure reflex symptoms. He had one case—his first case—in which uncontrollable vomiting yielded immediately upon withdrawal of a rubber drainage-tube. It may have been that the case reported was just at the point of recovery when the abdomen was reopened.

The fluid removed was small in quantity and without odor. The peritoneum, however, can secrete with wonderful rapidity, and then absorb the secretion. He had not examined the fluid microscopically or chemically. He had dusted into the cul-de-sac a small quantity of iodoform. Whether *post hoc* or *propter hoc*, the patient recovered.

If it was a case of exhaustion, the beef, milk, and whiskey deserved the credit. If a case of sepsis the reopening of the incision was the potent factor. In answer to a question by Dr. Sawyer, Dr. Dudley said that although the delirium of the patient was attended with visions of snakes, alcohol was out of the question, from his own knowledge of the habits of the patient. In answer to Dr. Merriman's question as to the preparation of the ligatures, Dr. Dudley said that silk thread was used exclusively for sutures and ligatures. This silk thread was boiled for ten minutes in a ninety-five per cent. solution of carbolic acid; then for thirty minutes in a five per cent. solution of carbolic acid; finally, it was deposited in a solution of the bichloride of mercury, one to four thousand. Dr. Dudley then exhibited the specimens. The right ovary was slightly enlarged, and in the commencing stage of cystic degeneration. A cyst about the size of a hickory nut was found in the right broad ligament. The left ovary was converted into a mass of fibrous tissue, about the size and shape of a kidney. Springing from the left parovarium or from the left broad ligament was the large monocus, to which allusion has been made. This cyst, at the time of the operation, contained about forty pounds of fluid.

DR. HENRY T. BYFORD thought that the reopening of the abdominal incision was unnecessary. Relief could not have come from the removal of such a small quantity of fluid as one-half fluidounce. The improvement immediately following the operation was probably due to the stimulant effect of the ether. The delirium seemed to him to be that of alcohol or cerebral anæmia. He did not think that the symptoms of nausea and vomiting could be explained by any local irritant such as ligatures or sutures. It was a case of exhaustion cured by the judicious exhibition of beef, whiskey, and milk.

DR. EDWARD W. SAWYER said that the patient owed her life to the persistent bravery of the operator, and congratulated him upon his success. He was surprised to hear that no albumen was detected in the aspirated fluid. Friedrichs says albumen is always present in such cases, but absent in echinococcus cysts.

DR. F. M. WILDER said that egg albumen in water was frequently tolerated by the stomach when other matters were rejected.

DR. W. W. JAGGARD thought that the secretory and resorptive functions of the peritoneum were matters of

positive knowledge. Dr. Anton Wölfler, in a recent paper, has taken substantially, Dr. Dudley's position. It is quite possible that the one-half fluidounce of blood serum, found in the cul-de-sac, represented the ultimate stage of resorption of a much larger quantity of fluid.

One-half fluidounce of fluid, however, may contain enough sepsin, or sufficient bacteria, to produce the most fatal pyæmia. There is no quantitative relation in regard to the virulency of certain poisons.

The mere reopening of the abdominal incision seems to act, under certain conditions, in a favorable manner. The reason is unknown. It is an empirical fact acknowledged by a number of leading surgeons.

He thought Dr. Dudley deserved great credit for his action, in taking up the suggestion of numerous operators, when he knew positively no foreign body was contained within the abdominal cavity.

DR. W. E. CASSELBERRY wished to emphasize the importance of the preparatory treatment of the intestinal tract. He had been present at both of the operations to which Dr. Dudley had referred, and was struck by the difference in the behavior of the intestines. The mixture employed by Dr. Dudley resembled a favorite formula of the late Dr. George B. Wood. This formula was advised for the expulsion of flatus, and restoration of tone to the intestinal muscular walls.

DR. D. T. NELSON said that it was highly important to avoid the use of opium, when it was possible. The less opium, in general terms, the less the tendency to vomiting. As to the pedicle, he entertained grave doubts as to the propriety of passing the ligature *en masse*. In strangulated hernia, uncontrollable vomiting frequently resulted from the inclusion of omentum in the ligature. Would it not be better to open the pedicle, and pass a ligature around each vessel separately? He thought Bantock, Thornton, and Spencer Wells advised the same treatment as in the securing of the vessels in an amputated leg.

DR. SAWYER said that he had seen Dr. John E. Owens remove a testicle; following the passage of the ligature around the cord, uncontrollable vomiting occurred. The reopening of the abdominal incision was looked upon with too much fear. He had been present at an operation in which all the blood had not been removed from the cul-de-sac; the patient died of septicæmia. At the autopsy, Douglas's pouch was filled with blood. An operation might have saved life. Another case, in point, was one of normal, double ovariectomy. After the operation, the patient sank rapidly. The operator concluded the patient was suffering from internal hemorrhage. Twelve hours later, the abdominal incision was reopened, and after two hours' search the bleeding vessels were secured. The patient recovered.

DR. H. P. MERRIMAN endorsed Dr. Dudley's reopening of the abdominal incision in the case presented. In regard to the preparatory treatment of the intestinal tract, he was not certain that the exhibition of calumba, rhubarb, and cardamom had produced the favorable result in the one case, nor that the neglect of preparatory treatment was operative in the troublesome condition in the other. He did not think the opium was the cause of vomiting, since the nausea disappeared while the patient was still under the influence of opiates.

He did not think the ligature *en masse* or the clamp could be replaced by the method suggested by Dr.

Nelson. The danger from hemorrhage was too great. It was an admirable subject for study. If the pedicle was completely destroyed, the danger of pinching nerve filaments would be less.

The quantity of fluid removed after reopening the incision was not sufficient to account for the improvement in symptoms.

DR. NELSON referred to the compression forceps, and ligature placed above, as designed to obviate the inclusion of nerves still sensitive.

DR. DUDLEY closed the discussion. The mere opening of the abdomen seemed to act in a remarkable manner under certain conditions. Tubercle of the peritoneum, papilloma of the omentum, were pathological states which had been influenced favorably by the procedure.

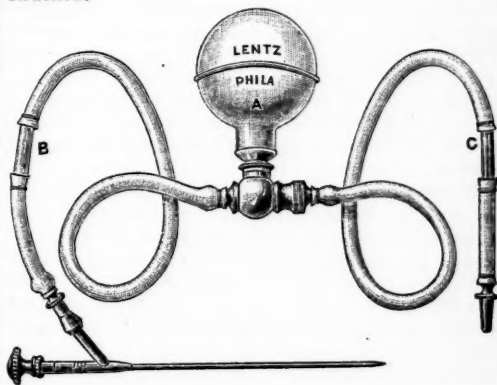
*Cocculus indicus* is supposed to have the same effect as the mixture exhibited to prepare the intestinal tract. It is not necessary that a discharge should have a foul odor, or be large in quantity, in order to be capable of producing pyæmia.

## NEW INVENTIONS.

### A NEW ASPIRATOR.

EVERY practitioner has occasional need for an aspirator, but the cost of those thus far placed on the market is such as to deter many from possessing one.

Dr. Frederic Cross, of Kingston, Pa., has devised one extremely simple in construction, which can be used without an assistant, and has thus far answered every demand made upon it. It is manufactured by Mr. Charles Lentz, of No. 27 South Tenth Street, Philadelphia. The accompanying cut illustrates its construction.



In place of an air-pump a strong rubber suction ball A draws the fluid through the canula, a valve prevents regurgitation, and another valve discharges the fluid through the distal tube of rubber. Glass peep-tubes B and C enable the flow of fluid to be observed, while the distal end, if wished, is kept immersed in the dejecta. After evacuating the sac the tube from the canula can be removed, and can be attached to the other end of the tube, which will enable water or a medicated wash to be injected into the cavity. Again, if the tubes be reversed, the cavity can again be evacuated.



## CORRESPONDENCE.

## COCAINE IN URETHRAL SURGERY.

To the Editor of THE MEDICAL NEWS.

SIR: I send you the following cases from my notebook, with the hope that they may elicit the experience of others in the same direction.

*Seminal Weakness.* Nov. 25, 1884. Being desirous of faradizing the urethra of W. G., I found the introduction of the urethral electrode prevented by the extreme sensitiveness of the mucous membrane. Having the day before secured a 2 per cent. solution of the hydrochlorate of cocaine, 3ss was slowly injected and retained for a few minutes, labile pressure upon the under surface of the penis being made to distribute the solution. The electrode was then introduced, and passed, without pain, into the bladder. Having been withdrawn to the desired point, the operation was proceeded with without further trouble.

*Spasm of the Sphincter Vesicae.* F. R. W., Nov. 30, 1884. Introduction of the urethral electrode for faradization of the muscle was rendered impossible, as the sensitiveness of the mucous membrane just inside the meatus caused the patient intense suffering when such manipulation was attempted. The injection of a 2 per cent. solution of cocaine relieved the condition in five minutes. This patient has been seen by me several times for this same trouble, and I have heretofore relieved the sensitiveness of the urethra by the injection of a weak solution of carbolic acid in glycerine.

*Chronic Cystitis.* C. A. R., Dec. 20, 1884. Patient has been under observation for several months, and all attempts to treat the case by internal applications of galvanism have been unavailing on account of the pain attendant upon the introduction of the urethral electrode. To-day I employed 3ss of a 2 per cent. solution of hydrochlorate of cocaine; and, there being no amelioration of the sensitive condition at the expiration of fifteen minutes, I injected the same amount of a 4 per cent. solution, which I obtained by evaporating a 2 per cent. solution over a sand-bath. This produced the desired effect in a very few minutes.

*Stricture of large Calibre in Spongy Portion.* H. S., Jan. 5, 1885. Whole urethral tract very sensitive. Injection of 3ss of a 2 per cent. solution of muriate of cocaine removed the hyperæsthesia from the greater part of the urethra, but produced no amelioration at the seat of stricture. Another injection of the same solution, located as well as possible with a long-nozzle syringe at the strictured portion, failed to relieve the difficulty. The next day, 3ss of a 2 per cent. solution was injected to allay the general hyperæsthesia, followed immediately by the application of a 4 per cent. solution in glycerine to the seat of the stricture by means of a canula and sponge. No relief of the sensitiveness was obtained, but the patient became extremely pale, remarked that it was growing dark, perspiration stood upon his face and hands, and in a moment more he had ejected the partially digested contents of his stomach upon the floor. He soon recovered, and felt no further disturbance.

The above cases are of interest as examples of the value of cocaine in urethral instrumentation, and the

last one indicates a field of investigation as to the depth to, and the tissues upon, which this alkaloid acts. The not serious, but decidedly unpleasant, symptoms in the last case are mentioned not that cocaine necessarily bears a causal relation to them, but that they may be remembered as having occurred in conjunction with the application of a 4 per cent. glycerole immediately following the injection of a 2 per cent. solution. I have not determined the existence of an ulcer at the seat of stricture which might account for the symptoms, and I have not developed them at subsequent operations, at which times I have not applied the cocaine so freely.

EZRA A. BARTLETT, M.D.

83 HAWK STREET, ALBANY, N. Y.  
JANUARY 25, 1885.

## NEWS ITEMS.

WASHINGTON.

(From our Special Correspondent.)

A BILL CONCERNING THE APOTHECARIES OF THE ARMY AND NAVY.—MR. RANDALL introduced a bill into the House of Representatives with the following provisions:

H. R. 8017. That the apothecaries of both Army and Navy shall receive a commission, those of the Army to have the relative rank of a second lieutenant of infantry, those of the Navy to have the relative rank of an ensign in the Navy.

Sec. 2. That the said apothecaries of both Army and Navy shall not be in line of promotion.

Sec. 3. That the said apothecaries of both Army and Navy shall receive the pay and emoluments of said grades in their respective branches of the service.

Sec. 4. That the said apothecaries of both Army and Navy shall not be entitled to any of the benefits that may be conferred by this Act until they have passed a satisfactory examination in the following branches, namely: Elementary chemistry, materia medica, pharmacy, and botany.

Sec. 5. That the said Board of Examiners shall consist of three medical officers, to be chosen, those from the Army, by the Secretary of War, and those from the Navy, by the Secretary of the Navy.

Sec. 6. That each and every apothecary who shall be serving in such capacity, at the time of the passage of this Act, shall be granted an examination, and if found proficient in the above-mentioned branches, shall receive a commission in that branch of the service to which he may be attached.

Sec. 7. That this Act shall take effect immediately after the passage of the same, or so soon thereafter as the requirements above mentioned in regard to the said Board of Examiners can be met.

THE GARFIELD MEMORIAL HOSPITAL.—A report having been made in the newspapers that this hospital was about to close its doors for want of funds, a statement has been published that its financial condition is not so depressed as has been represented. It certainly is in need of funds, but it is out of debt. Since its opening, in June, 1884 (May 30th, to be more correct), 115 patients have been received, of whom 79 occupied free beds. The Surgeon-General of the Army, Dr. Murray, speaks unqualifiedly in approval of the man-

agement. The ladies who have undertaken to procure funds for the institution are still sanguine of being able to provide the necessary ways and means for its support.

A BILL FOR THE PROMOTION OF ANATOMICAL SCIENCE IN THE DISTRICT OF COLUMBIA passed the House on January 12th, is now before the Senate, and it is hoped will become a law before the close of the present session. In its provisions it is of the first importance to the medical colleges of the District, which this winter have a pretty full attendance, and bid fair to continue in a prosperous condition. The medical department of the Columbian University (the National Medical College) has opened its doors to women during the present session, four of whom have already matriculated. This step was not taken without due deliberation, and the male students do not seem to be disturbed by the introduction of a new element into their midst.

The bill reads as follows:

*Be it enacted, etc.,* That any public officer or officers, whether directors, trustees, superintendents, wardens, keepers, or managers, having lawful charge of, or control over, any hospital, prison, almshouse, jail, morgue, or asylum, within the District of Columbia, may deliver to the duly authorized agent of any medical college or colleges in the said District of Columbia, the bodies of such deceased persons as are required to be buried at the public expense, said bodies to be distributed among the several colleges equitably, the number assigned to each being proportioned to that of its students.

*Provided, however,* That, if the deceased person, during his last illness, of his own accord, requested to be buried; or if, within twenty-four hours after his death, any person claiming to be, and satisfying the authorities that he is, of kindred to the deceased, asks to have the body buried; or if such deceased person was a stranger or traveller, who suddenly died, the body shall not be so delivered, but shall be buried.

Sec. 2. That every physician or surgeon, before receiving such dead body, shall give to the officers surrendering the same to him a sufficient bond that each body shall be used only for the promotion of anatomical and surgical knowledge within the District of Columbia; and that, after having been so used, the remains thereof shall be decently buried; and whosoever shall use such body or bodies for any purpose other than that aforesaid, or shall remove the same beyond the limits of the said District of Columbia, and whosoever shall sell or buy such body or bodies, or in any way traffic in the same, or who shall disturb or remove bodies from graves in which they have been buried, shall be deemed guilty of a misdemeanor, and shall, on conviction, be imprisoned for a term not exceeding three years, at hard labor, in the District (or city) jail.

The Committee on the District of Columbia recommend the bill in the following words: There are now several flourishing medical schools in Washington well established, and one or more of them of long standing. It is known to all that such institutions cannot be carried on or proper training for the practice of medicine and surgery be given without ample experience in the dissection of the human cadaver. This fact is recognized and approved by all, and yet public opinion as strongly approves and demands stringent laws for the punish-

ment of the desecration of graves in order to procure the necessary dissecting material. Hence the laws of the District are very severe, and properly so, against the crime of grave-robbing. With such laws in operation, and such necessities for the schools of medicine, the authorities of the District are compelled either to wink at this offence or seriously to cripple, if not to destroy, the efficiency and success of these schools. Furthermore, the heads of these institutions, professors and students of science, are compelled to supply their admitted necessities by confederating with and employing professional grave-robbers, and constantly to incur the risk of detection and criminal prosecution; and it being known in a community that the trade of resurrecting bodies for dissection is a common one, kindred and friends are frequently tortured with anxiety lest the hand of the resurrectionist shall remove the bodies of their dead.

This bill is intended to relieve from such fears, to do away with the necessity or temptation for violating the laws, and at the same time in an open and legal way to provide the requisite dissecting material for the study and advancement of anatomical science in the District. A careful comparison with the statutes of some of the States shows its provisions to be prudently and aptly framed, and intended to accomplish the purpose in view, in a manner as little repellant to public sentiment and sensibility as practicable.

A BILL TO REGULATE THE PRACTICE OF DENTISTRY IN THE DISTRICT OF COLUMBIA passed the House of Representatives on January 12. It provides for a board of examiners, and requires them to make proper inquiries into the fitness of all who practise dentistry in the District of Columbia, to issue certificates of competency, and to keep a full register of dentists so practising. Non-compliance with the provisions of the Act is made punishable by a fine of not less than fifty dollars or more than two hundred dollars, in default of the payment of which, imprisonment for not less than thirty days nor more than ninety days. Nothing in the Act to be so construed as to prevent surgeons and physicians from extracting teeth and prescribing for or treating diseases of the mouth.

**YELLOW FEVER.**—Surgeon-General Hamilton, of the Marine-Hospital Service, has been informed of the existence of yellow fever in malignant form at Panama and Colon. In a single cemetery at Panama, there have been more than one thousand interments between July and December, and it is estimated that about 2400 people were buried in that city during the year 1884. It is suggested that all vessels coming from Colon and Panama to ports of the United States be watched with extreme care by health officers.

**NEW YORK POLYCLINIC.**—The Board of Directors and Faculty of the New York Polyclinic held their annual meeting on January 20. The Secretary submitted to the Board a report of the work done by the Polyclinic from its opening, November 7, 1882, to January 20, 1885, giving in detail the history of the organization of the school, its plan of work, and the results achieved. The number of practitioners who had studied

in the Polyclinic as members of the class was 463. The attendance for the present session was twenty-five per cent. in excess of any former year.

**A NEW DYNAMOMETER.**—At the last meeting of the Philadelphia County Medical Society, Dr. H. Leaman presented a dynamometer, by which he claims he can measure the value of that part of a uterine contraction which is available in the expulsion of the fœtus. It is intended to measure the expulsive force of the uterus minus the resistance in succession of the uterine cervix, pelvic walls, and perineum, and might be called a parturiometer. He thinks it will prove valuable as a means of determining when instrumental interference becomes necessary.

**OHIO STATE SANITARY ASSOCIATION.**—The second annual meeting of the Ohio State Sanitary Association will be held at Columbus, Ohio, February 5 and 6, 1885.

**THE Lacaze prize** of 10,000 francs has been awarded by the Faculty of Medicine of Paris to M. DEBOVE for his *Clinical Lessons on Tuberculosis*.

#### NOTES AND QUERIES.

##### COCAINE IN VAGINISMUS.

To the Editor of THE MEDICAL NEWS.

SIR: In your issue of last week, a statement is given, under "Medical Progress," of the successful application, in Paris, of muriate of cocaine for the relief of vaginismus. At the gynecological clinic of Jefferson Medical College, December 9th, Dr. Henry Morris made such application in a patient suffering from vaginismus, and with a very satisfactory result.

T. P.

PHILADELPHIA, Jan. 23, 1885.

##### CANADIAN REQUIREMENTS FOR THE DEGREE OF M.D.

In reference to some remarks in THE NEWS of December 6th, Dr. Panton, of Portland, Oregon, calls our attention to the fact that the University of Toronto has, since 1877, rigidly required four full years for the degree in medicine, not allowing the optional year with a physician still permitted at many Canadian schools.

##### OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 20 TO JANUARY 26, 1885.

**TREMAINE, W. S., Major and Surgeon.**—Granted leave of absence for one year on surgeon's certificate of disability.—*S. O. 14, A. G. O.*, Jan. 17, 1885.

**MAUS, LOUIS M., Captain and Assistant Surgeon.**—Granted leave of absence for two months on surgeon's certificate of disability, with permission to leave the Division of the Missouri.—*S. O. 16, A. G. O.*, Jan. 20, 1885.

**STEPHENSON, WILLIAM, First Lieutenant and Assistant Surgeon.**—Relieved from duty at Fort Omaha, Neb., and ordered to Fort Niobrara, Neb., for duty.—*S. O. 6, Department of the Platte*, Jan. 19, 1885.

##### OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FROM OCTOBER 1 TO DECEMBER 31, 1884.

**BAILHACHE, P. H., Surgeon.**—Granted leave of absence for thirty days, Oct. 9, 1884. To proceed to Wilmington, N. C., as inspector, Nov. 10, 1884. Relieved from duty as chief of purveying division; to proceed to Philadelphia, Pa., and assume charge of the Service, Dec. 10, 1884.

**WYMAN, WALTER, Surgeon.**—Granted leave of absence for fifteen days, Oct. 15, 1884. Leave of absence for fifteen days in

December, 1884, and thirty days in January, 1885, also for a further period from January 31, 1885, without pay, and with permission to visit Europe, Dec. 8, 1884.

**PURVIANCE, GEORGE, Surgeon.**—When relieved, to proceed to Cincinnati, O., and assume charge, Nov. 12, 1884. To Louisville, Ky., as inspector, Nov. 24, 1884.

**AUSTIN, H. W., Surgeon.**—To proceed to Boston, Mass., and assume charge, Nov. 12, 1884.

**SMITH, HENRY, Surgeon.**—When relieved, to proceed to Cairo, Ill., and assume charge, Nov. 9, 1884. Granted leave of absence until January 15, 1885, Dec. 17, 1884.

**STONER, G. W., Passed Assistant Surgeon.**—Relieved from duty at Delaware Breakwater Quarantine, to proceed to Cairo, Ill., in accordance with former orders, Oct. 14, 1884. To Norfolk, Va., Nov. 19, 1884.

**IRWIN, FAIRFAX, Passed Assistant Surgeon.**—To close Cape Charles Quarantine, October 31, 1884, proceed to Washington, and report to Surgeon-General, Oct. 14, 1884. To take charge of the Service, port of Georgetown, D. C., and detailed as Acting Chief Clerk, Surgeon-General's Office, Oct. 30, 1884. To Philadelphia, Pa., and Baltimore, Md., as inspector, Dec. 30, 1884.

**MEAD, F. W., Passed Assistant Surgeon.**—When relieved, to proceed to Baltimore, Md., and assume temporary charge, Dec. 10, 1884.

**HEATH, W. H., Passed Assistant Surgeon.**—Granted leave of absence for thirty days on account of sickness, Oct. 24, 1884. When relieved, to proceed to Pittsburg, Pa., and assume charge, Dec. 26, 1884.

**GUITÉRAS, JOHN, Passed Assistant Surgeon.**—To report to Surgeon-General, Nov. 8, 1884. Leave of absence extended fifteen days without pay, Nov. 14, 1884.

**WHEELER, W. A., Passed Assistant Surgeon.**—Relieved at Chicago, Ill., to proceed to Buffalo, N. Y., and assume charge, Dec. 26, 1884.

**BANKS, C. E., Passed Assistant Surgeon.**—When relieved, detailed for special duty; upon completion of same, to Boston, Mass., for duty, Oct. 28, 1884.

**PECKHAM, C. T., Passed Assistant Surgeon.**—Granted leave of absence for twenty days, Dec. 26, 1884.

**BENNETT, P. H., Assistant Surgeon.**—When relieved, to rejoin his station (Detroit), Nov. 20, 1884.

**AMES, R. P. M., Assistant Surgeon.**—To report to Surgeon Hutton, at Louisville, Ky., for examination for promotion, Nov. 13, 1884.

**DEVAN, S. C., Assistant Surgeon.**—To proceed to Tacoma, W. T., as inspector, Oct. 14, 1884.

**KALLOCH, P. C., Assistant Surgeon.**—Granted leave of absence for thirty days, Nov. 19, 1884.

**GLENNAN, A. H., Assistant Surgeon.**—To proceed to Key West, Fla., for temporary duty, Oct. 8, 1884.

**BATTLE, K. P., Assistant Surgeon.**—Granted leave of absence for thirty days on account of physical disability, Dec. 6, 1884.

**BROOKS, S. D., Assistant Surgeon.**—To proceed to New York, N. Y., for temporary duty, Oct. 20, and Nov. 26, 1884.

**WHITE, J. H., Assistant Surgeon.**—To proceed to New Orleans, La., for temporary duty, Oct. 3, 1884. To escort insane seamen to Government Hospital for the Insane, Dec. 17, 1884. Granted leave of absence for fifteen days, Dec. 23, 1884.

#### RESIGNATION.

**SMITH, HENRY, Surgeon.**—Resignation accepted by the Secretary of the Treasury, to take effect January 15, 1885, Dec. 17, 1884.

#### APPOINTMENT.

**WHITE, JOSEPH H., M.D.**, of Georgia, having passed the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, Oct. 2, 1884.

#### PROMOTIONS.

**PECKHAM, C. T., Passed Assistant Surgeon.**—Promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from December 1, 1884, Nov. 28, 1884.

**AMES, R. P. M., Passed Assistant Surgeon.**—Promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from December 1, 1884, Nov. 28, 1884.

**DEVAN, S. C., Passed Assistant Surgeon.**—Promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from December 1, 1884, Dec. 5, 1884.

**URQUHART, F. M., Passed Assistant Surgeon.**—Promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from December 1, 1884, Dec. 5, 1884.